



January 4, 2019

To: Wisconsin Public Service Commission

Re: Wisconsin's Green Fire: Voices for Conservation Environmental Impact Statement (EIS) scoping comments for Docket 5-CE-146, application for building the Cardinal-Hickory Creek (CHC) high voltage transmission line (hvtl).

I. INTRODUCTION: Wisconsin's Green Fire: Voices for Conservation (WGF) is an independent nonpartisan organization. WGF supports the conservation legacy of Wisconsin by promoting science-based management of its natural resources. Members represent extensive experience in natural resource management, environmental law and policy, scientific research, and education. Members have backgrounds in government, non-governmental organizations, universities and colleges and the private sector. More information about WGF can be found at www.wigreenfire.org.

II. ENVIRONMENTAL RULES, Federal and State EIS process for the proposed CHC:

The American Transmission Company (ATC), International Transmission Company, ITC Holdings, and Dairyland Power Cooperative have proposed construction of the Cardinal-Hickory Creek (CHC) 345 kV hvtl from Dubuque County, Iowa to Middleton, Wisconsin. The proposed CHC project would extend over 100 miles. The proposed CHC is subject to federal Environmental Impact Statement (EIS) review through the U.S. Department of Agriculture and Wisconsin review through the Wisconsin Public Service Commission (PSC). The PSC and Wisconsin Department of Natural Resources (DNR) will use public scoping documents to write an EIS for the project. An EIS is directed by the Wisconsin Environmental Policy Act (WEPA), s. 1.11 Wis. Stats., and the National Environmental Policy Act (NEPA). The fundamental elements of WEPA are, in part, "To provide details of beneficial aspects of the project, both short term and long term; Irreversible or irretrievable commitments of resources that would be involved should it be implemented; Alternatives to the proposed action; initiate and utilize ecological information in planning." **WGF requests the PSC follow all portions of WEPA regarding the proposed CHC. WGF requests the PSC consider these submitted comments concerning the proposed CHC.**

III. PUBLIC TRUST LANDS AND WATERS affected by proposed CHC routes: The preferred or alternate routes would run through southwest Wisconsin's Driftless Area unique ecoregions and sensitive scenic landscapes, with the potential to affect the ecologic, recreational, cultural, agricultural, tourism, and economic resources along either proposed route. **The EIS should thoroughly evaluate potential effects to these resources.** Refer to the CHC application for proposed route locations. <https://psc.wi.gov/Pages/MajorCases/CardinalHickoryCreek.aspx>

According to the U.S. Department of Agriculture, "the Driftless Area's diversity of habitat provides critical habitat for dozens of species of concern in the Wisconsin State Wildlife Action Plans, and has been cited as one of North America's most important resources." (U.S. Department of Agriculture,

Regional Conservation Partnership Program, Investing in Wisconsin-2016, “Driftless Area-Habitat for the Wild and Rare”). Critical habitats are discussed in greater detail later in these comments.

Public trust lands on the proposed routes include federal and state lands.

Federal management: Upper Mississippi River National Wildlife and Fish Refuge and Ice Age National Scenic Trail.

State management: Belmont Mound, Blue Mound, and Governor Dodge State Parks; Trails Military Ridge and Pecatonica; Blackhawk Lake Recreation Area; Military Ridge Prairie Heritage Area; Southwest Wisconsin Grassland and Stream Conservation Area; Conservation and Natural Areas 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 that would be crossed on the proposed routes include: Mississippi River, Lower Wisconsin State Riverway, Grant and Platte Rivers, Jack Oak and Cassville Sloughs, headwaters of the Sugar and Pecatonica 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. **The EIS should examine both temporary construction impacts and permanent impacts to waterways and wetlands.**

IV. NATURAL ECOSYSTEM COMMUNITIES affected by proposed CHC routes and Management

Implications: The proposed CHC routes would fragment and impact rare ecosystem communities of the Driftless Area (Wisconsin Department of Natural Resources Natural Heritage Inventory working list. <https://dnr.wi.gov/topic/nhi/wlist.html>). Rare natural ecosystems include pine relicts, grasslands of dry and dry-mesic, sand, and mesic or tallgrass prairie. Dry and dry mesic prairie is found on the lower slopes of Driftless Area bluffs. Sand prairie may occur on broad sand terraces bordering the Mississippi and Wisconsin River areas in the proposed CHC routes. Mesic, or tallgrass prairie, is now extremely rare in Wisconsin, with over 99% of this ecosystem type lost from Wisconsin landscapes (Wisconsin natural ecosystem communities. Wisconsin Department of Natural Resources <https://dnr.wi.gov/topic/EndangeredResources/Communities.asp?mode=detail&Code=CTFOR016WI>).

Southwest Wisconsin Grassland and Stream Conservation Area (SWGSCA), one of the best grassland conservation opportunities in the upper Midwest, lies in the heart of the Driftless Area and the proposed CHC routes. SWGSCA contains exceptional populations of grassland birds, which are in serious decline across their range, scattered remnants of original prairie and savanna, concentrations of rare plants and animals, and spring-fed streams. The 473,900-acre SWGSCA is set within an expansive rural farming region of open fields, croplands, oak groves, and pastures. The overall success of SWGSCA depends on coordinated work with many partners and private landowners, many whom have been protecting and managing grasslands, farmlands, streams, and prairies in this area for years. Maintaining working farms on areas of prime agricultural land is a priority listed for the SWGSCA

(South West Wisconsin Grassland and Stream Conservation Area. Wisconsin Department of Natural Resources. Webpage <https://dnr.wi.gov/topic/Lands/grasslands/swgrassland.html>).

The EIS developed by the PSC should consider possible cumulative impacts from the proposed CHC on the ecological health of the Driftless Area, including the entire SWGSCA and the Military Ridge Prairie Heritage Area. The EIS should also address habitat fragmentation and ensuing impacts. The proposed CHC would cause land fragmentation, habitat damage and disruption from construction and maintenance of the line. The Wisconsin Department of Natural Resources (DNR) considers the Military Ridge Prairie Heritage Area of utmost priority for landscape-scale grassland protection and management. The area has been identified by the Nature Conservancy as critical for the protection of Midwest prairie remnants and area-sensitive species, including endangered and threatened grassland birds (The Nature Conservancy: The Places We Protect.

<http://nature.org/ourinitiatives/regions/northamerica/unitedstates/wisconsin/placesweprotect/priority-area-military-ridge-prairie-heritage-area.xml>).

The unglaciated Driftless Area exhibits a classically branched stream pattern and steep slopes. Coldwater streams are concentrated in this area, and contain relatively few fish species dominated by trout and sculpins. Coolwater communities also occur in these areas and contain a moderately diverse fish fauna with a mix of coldwater and warmwater species. Hardwater springs are also associated with the Driftless Area. These springs are critical sources of groundwater for the cold and coolwater communities and habitat for several rare species. Wetlands are mainly associated with groundwater springs, seeps and coldwater streams, although floodplain forest and emergent marsh are major wetland types associated with larger stream systems like the Mississippi River. Southern sedge meadows are commonly associated with groundwater systems. They are considered vulnerable in Wisconsin due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors. High quality emergent marshes and floodplain forests are associated with large river systems and are increasingly rare due to the invasion and dominance of non-native species.

(Wisconsin natural ecosystem communities. Wisconsin Department of Natural Resources

<https://dnr.wi.gov/topic/EndangeredResources/Communities.asp?mode=detail&Code=CTFOR016WI>).

Construction, maintenance, and future management of utility lines, corridors and substations can result in the following activities and impacts:

Construction of substations and utility lines – wetland filling and disturbance, logging, brushing, mowing, soil compaction, invasive species (IS) introduction, non-native species planting, excessive sediment inputs to streams during construction, decrease in stream stability with continuous stream crossings by heavy machinery.

Maintenance – brushing, IS introduction.

Management – limitation of prescribed burning, IS control and other restoration activities, and open corridors which can increase deer, predators, nest parasitism, and IS introduction.

Potential impacts to trout streams and introduction of invasive species are major concerns that should be addressed in the EIS. Sediment in trout streams is an issue when it covers invertebrate food production areas and trout spawning redds by preventing adequate oxygen exchange. Even a very fine layer of silt can prevent eggs from receiving adequate oxygen for embryo development, potentially decreasing annual recruitment. The most critical times are from early October when spawning begins until mid-April when the eggs begin to hatch.

Invasive plant species cause problems by reducing stream bank plant diversity and decreasing food production of insect species, a valuable food source for fish. They also decrease small mammal, bird, reptile and amphibian species associated with cold water ecosystems. Some of these species are considered state threatened or endangered.

There is also the potential to introduce aquatic invasive species by crossing heavy equipment through the many streams and rivers along the lengthy proposed corridor. Species such as the New Zealand mud snail, zebra mussels, Eurasian water milfoil and Myxobolus Cerabalii (a parasite fatal to salmonids) have all been known to "hitchhike" from one water body to another by inadequate cleaning of boats, waders and other equipment.

A specific concern related to management is that prescribed burning and other restoration activities are likely to be restricted within the power line corridor. Land trusts, natural areas managers and others need to include regular prescribed burning regimes to support rare fire-dependent ecosystems. The US Natural Resource Conservation Service requires burning of many Conservation Reserve Program (CRP) areas. If this management action is restricted, important wetland, savanna and prairie areas will be degraded and these areas may not be eligible for CRP payments, possibly leading to increased erosion and sedimentation if they are farmed. **Within the powerline corridor, all areas where natural communities are managed, CRP lands are present and potential CRP sites are located, need to be evaluated for potential adverse impacts.**

Wetlands are relatively scarce in the Driftless Area. For that reason, the significance of wetland functional values is higher. **All wetlands potentially impacted need to be identified, surveyed and assessed.** Plant communities should be surveyed using methods such as the DNR's Timed Meander and Floristic Quality Assessment methods. Assessment should be done using DNR's Rapid Wetland Assessment Methodology, v. 2. (<https://dnr.wi.gov/topic/wetlands/methods.html>)

Wetland functional values include floristic integrity; human use values which includes natural scenic beauty, endangered and threatened species, cultural and other uses; wildlife and aquatic life habitat; floodplain and water quality functions; shoreline anchoring; and groundwater processes. **These**

functional values should be assessed, as well as the potential impacts to those functional values. A thorough assessment will evaluate direct, secondary and cumulative impacts. The EIS should also address any possible impacts to springs and seeps, coldwater and coolwater streams and other surface waters.

Mitigation is only required for certain wetland areas proposed to be filled. It is not required for the majority of adverse environmental impacts expected to occur including impacts to upland habitats and wildlife, degraded but not filled wetlands, areas invaded by non-native species, irreversible losses to rare communities and loss of restoration potential. **The EIS should address the significance of these impacts.**

Economic Value of Conserved Lands: WGF requests that the EIS economic evaluation include the value of conserved lands and the public and private investments to accomplish land and water conservation in the project area. This evaluation should include present market value of the lands. Significant investments have been made in terms of funding and time by many government agencies and groups over the years for conservation of Driftless Area prairie lands and water resources. These groups include U.S. Department of Agriculture's Natural Resources Conservation Service, U.S. Fish and Wildlife Service, Farm Service Agency and Farm Bill programs, Wisconsin DNR, The Nature Conservancy, The Prairie Enthusiasts, Pheasants Forever, Driftless Area Land Conservancy, Trout Unlimited, and others. WGF requests that PSC include these economic conservation investments in the EIS.

V. PUBLIC TRUST WILDLIFE SPECIES affected by proposed CHC routes: There are numerous endangered, threatened, and special concern wildlife species who inhabit the biodiverse lands of the proposed CHC (Wisconsin Department of Natural Resources Natural Heritage Inventory working list. <https://dnr.wi.gov/topic/nhi/wlist.html> ; Wisconsin Wildlife Action Plan: Habitats. Wisconsin Department of Natural Resources. https://dnr.wi.gov/files/pdf/pubs/nh/nh0983_4_0-3.pdf).

Pollinators and other insects: 11 bumblebee species including the federally Endangered rusty-patched bumble bee and the State Endangered regal fritillary butterfly. State Endangered Silphium borer moth may likely occur on these lands due to their habitat preference.

Amphibians: state Endangered Blanchard's cricket frog, and species of Special Concern pickerel frog.
Reptiles: state Endangered box turtle, species of Special Concern with protected status Blanding's turtle, and all the following species of Special Concern snakes: timber rattlesnake, North American blue-racer, black ratsnake, bull (gopher) snake, and plains garter snake.

Mammals: state Threatened big brown bat and little brown bat, and species of Special Concern Franklin's ground squirrel, prairie and woodland voles. The American badger is a Wisconsin non-game protected species and an iconic mammal of the Driftless Area, which may experience population effects due to habitat disruption and degradation.

Birds depend on lands in the proposed CHC routes during winter, migration, and nesting seasons. The proposed CHC would affect important bird nesting habitat.

Confirmed bird nesting species: state Endangered loggerhead shrike; state Threatened Henslow's sparrow, Acadian flycatcher, cerulean warbler, and hooded warbler; Species of Special Concern grasshopper, lark, and vesper sparrows, bobolink, dickcissel, eastern meadowlark, upland sandpiper, Northern bobwhite, eastern whip-poorwill, common nighthawk, Bell's vireo, red-headed woodpecker, prothonotary warbler, and American woodcock. Federally protected bald eagles had over 40 confirmed nests in 2018 along the proposed CHC routes. These confirmed nesting data are part of the long-term Wisconsin Breeding Bird Atlas Survey II (Wisconsin Breeding Bird Atlas II. Season 4 preliminary results and trends. <https://ebird.org/atlaswi/news/season-4-preliminary-results-and-stats>). Data are collected by trained observers and entered into a world-wide database (eBird Status and Trends. <https://ebird.org/science>). These data are significant, and should be considered when making decisions about important nesting habitat for vulnerable bird species in the Driftless Area.

VI. AVIAN AND BAT impacts from the proposed CHC routes: Birds are critically important, as they provide key ecosystem services through pollination, and insect and weed-seed control for the agribusiness and forest products industries. Over the past 40 years grassland bird populations have been steadily declining in Wisconsin, resulting in many being listed as state Species of Greatest Conservation Need. Almost all are classified as such because habitat suitable for their survival has decreased, been degraded, or fragmented below their tolerance and ability to adapt and sustain viable populations (Wisconsin Breeding Bird Atlas II. https://wsobirds.org/images/atlas/SSS_Threatened_Grassland_Birds.pdf).

Creating and maintaining habitat for grassland birds is imperative to their survival. The Bird Conservation Area (BCA), within the SWSGCA, was created to maintain sustainable breeding populations of grassland birds. The BCA concept is backed by research that suggests viable bird populations require conservation efforts on a large, landscape level. The present BCA encompasses a block of more than 10,000 acres of public and private lands (South West Wisconsin Grassland and Stream Conservation Area. Bird Conservation Area, description and map. Wisconsin Department of Natural Resources. <https://dnr.wi.gov/topic/Lands/grasslands/swgrassland.html>). The entire BCA, and the birds who depend on this habitat in the Driftless Area, would be affected by the proposed CHC due to habitat reduction, degradation, or fragmentation.

Winter is an extreme survival period for birds. The National Audubon Society has sponsored Christmas Bird Counts (CBC) across North America for over 100 years. CBCs are the longest running citizen science survey in the world, and provide critical data on winter bird populations (Christmas Bird Count, Wisconsin Society of Ornithology. <https://wsobirds.org/christmas-bird-count>). The entire Mount Horeb Area CBC is within the proposed CHC routes. A data set of expert winter bird observations has an average of 56 winter bird species recorded annually since the year 2000, and reveals the crucial nature

of quality winter habitat for birds in this area. Nine different raptor species, including federally protected golden and bald eagles, state Threatened red-shouldered hawks, species of Special Concern red-headed woodpeckers and short-eared owls have been counted during winter in this area.

A recent study found that southwest Wisconsin forests have warmer microclimates that help songbirds survive winter weather. Fragmented forests are less effective at dampening climate extremes, and increase bird mortality (Forest 'islands' offer refuge to wintering birds. University of Wisconsin News. February 2017. TYRRELL, K. WEBPAGE <https://news.wisc.edu/forest-islands-offer-refuge-to-wintering-birds/>). The proposed CHC would create forest and other habitat fragmentation, weaken existing microclimates, and threaten winter bird survival. Data, including the 28 year continuous Mount Horeb Area CBC winter bird data set, should be considered when making decisions that would impact vital winter habitat from the proposed CHC. The EIS should include a robust evaluation of habitat fragmentation and its effects.

Mortality events would likely occur to all wildlife species along the proposed CHC routes. Low frequency electrical transmission lines at high voltage have been proven to impact flying insects (Wyszkowska, J. et al. 2018. Exposure to extremely low frequency electromagnetic fields alters the behavior, physiology and stress protein levels of desert locusts. Scientific Reports 6:36413). Impacts from high voltage transmission lines to pollinators can include interference with navigational mechanisms of monarch butterflies, especially from the influence of the magnetic fields (Reppert, S.M. et al. 2010. Navigational Mechanisms of Migrating Monarch Butterflies. Trends Neurosci. 2010 Sep; 33(9): 399–406). The CHC proposed routes are in the migratory pathway of monarch butterflies.

Estimated impacts to birds from powerline collisions may number from 8 to 57 million bird deaths annually based on recent sensitivity analysis and a meta-review of studies (Loss S.R. et al. 2014. Refining estimates of bird collision and electrocution mortality at power lines in the United States. PLoS One 9(7). <https://doi.org/10.1371/journal.pone.0101565>). The Avian PowerLine Interaction Committee (APLIC) has developed several guidance documents that contain conservation measures for reducing impacts to bird and bat populations (Avian PowerLine Interaction Committee. Webpage <https://www.aplic.org/>). Bat and bird mortality from the proposed CHC routes would undoubtedly occur. **The EIS should consider avian mortality. If the CHC were constructed, it should be required to employ robust conservation measures to reduce impacts to bird and bat populations.**

The EIS needs to consider impacts to bat populations, especially in light of recent deleterious impacts to cave-dwelling bats from the fungal disease White Nose Syndrome (WNS; Pseudogymnoascus destructans). To date, WNS is conservatively estimated to have killed more than seven million hibernating bats in 25 U.S. states and six Canadian provinces. Bat population declines of >80 % in the northeastern U. S. have recently been reported (Reynolds, H.T. et al. 2015. Modeling the environmental growth of Pseudogymnoascus destructans and its impact on the white-nose syndrome epidemic. J Wildl Disease Vol. 51, No. 2, pp. 318-331.). WNS is present in cave dwelling bats in Wisconsin (White Nose

Syndrome. Wisconsin Department of Natural

Resources. <https://dnr.wi.gov/news/Weekly/Article/?id=4254>). A bat hibernation cave approximately 0.3 miles from the proposed CHC route is monitored by the DNR for WNS (Stanfield, J.D. personal observation 8 Dec 2018. in: To PSC of Wisconsin – Scoping Input to EIS for Docket 5-CE-146. Application for building the Cardinal-Hickory Creek (CHC) High Voltage Transmission Line (HVTL)). All efforts to protect bats and reverse population declines are critically important. Any efforts to reduce or eliminate additional compensatory and/or additive mortality should be employed. The proposed CHC routes would likely increase bat mortality.

In addition to direct impacts, birds, bats, and other species are impacted by the indirect effects of transmission and distribution lines. The proposed CHC would likely increase these indirect mortality effects for all species. **The EIS should acknowledge and address indirect mortality.** These indirect effects include the introduction of barriers to movement, habitat fragmentation, site avoidance or abandonment, disturbance, loss of population vigor, behavioral modification, creation of suboptimal or marginal habitats, loss of refugia, and intraspecific and interspecific competition for resources. Most of these indirect effects are difficult to quantify, difficult to separate from other impacts, and for the most part have not been quantitatively tested, critically reviewed, and published in refereed journals (Manville, A.M. II. 2013. Anthropogenic-related bird mortality focusing on steps to address human caused problems. Invited, peer-reviewed white paper for Anthropogenic Panel 5th International Partners in Flight Conf. August 27, Snowbird, UT.Div Mig Bird Mgt, USFWS, pp 1–16. and Manville, A.M. 2016. Chapter 20: Impacts to Birds and Bats Due to Collisions and Electrocutions from Some Tall Structures in the United States: Wires, Towers, Turbines, and Solar Arrays—State of the Art in Addressing the Problems. http://www.electronicssilentspring.com/wp-content/uploads/2016/01/chp_10.1007_978-3-319-22246-2_20.pdf).

EIS INVESTIGATION REQUEST: In addition to incorporating the above concerns provided pertaining to bird, bat, and other species mortality, WGF requests that the PSC consult available pertinent research, studies, and other resources and provide an estimate of the bird and bat impacts from the addition of at least 8 high tension wires crossing the 1.6 mile span of the Upper Mississippi River National Wildlife and Fish Refuge near Cassville, Wisconsin and at other potential waterway crossings.

VII. TOURISM and OUTDOOR RECREATIONAL OPPORTUNITIES affected by proposed CHC

routes: Wisconsin's tourism industry accounted for \$20.6 billion of Wisconsin's economy and supported 195,255 jobs in 2017 (Tourism is Big Business for Wisconsin Communities. S. Klett Jul 27 2018 Superior Telegram. Webpage <https://www.superiortelegram.com/opinion/columns/4478123-tourism-big-business-wisconsin-communities>). The Driftless Area's tourism thrives on clean air, clear water and natural ecosystems. Many people participate in extensive outdoor recreational opportunities including hiking, biking, birding, skiing, hunting, trout fishing, camping, car touring, and other pursuits

(<https://dnr.wi.gov/topic/Lands/Grasslands/documents/swgscatour.pdf>). The Military Ridge State Trail attracts more than 3000 bike riders per year.

The public trust lands and waters along the proposed CHC routes are heavily utilized by hunters and anglers. Trout fishing in the Driftless Area is now a 1.6 billion dollar industry according to an economic study conducted by Trout Unlimited in 2016. This an increase from the 1.1 billion dollars determined in an earlier 2008 study. This trend is expected to continue as land use improves groundwater infiltration, increasing base flows and decreasing water temperatures. Coupled with aggressive trout habitat restoration efforts and wild trout stocking, the area has seen a tremendous increase in self-sustaining populations of both brook and brown trout species that draw anglers from all parts of the globe.

A substantial amount of stream restoration work has been completed due to the efforts and funding of many partner groups. Black Earth Creek is one of the most heavily fished trout waters in Wisconsin. Trout fishing demand far exceeds public access availability (Southwest Driftless Trout Team. Wisconsin Department of Natural Resources <https://dnr.wi.gov/topic/fishing/streambank/SWDriftlessTrout.html>).

Feeding, photographing, and watching birds is a \$32 billion/year U.S. recreational industry (Carter, E. 2013. Birding in the United States: demographic and economic analyses. USFWS Rep 2011–1:1–16). Many people come to the Driftless Area, especially the Southwest Wisconsin Grassland and Stream Conservation Area, specifically for birding. There are several partnership organizations in Wisconsin devoted entirely to bird conservation including the Wisconsin Bird Conservation Initiative (WBCI). WBCI has a strategic plan for 2018-2022, an All Bird Plan for the southwest savanna, western coulee and ridges area, and has designated Darlington, Monroe, and Spring Green as Wisconsin Bird Cities (Wisconsin Bird Conservation Initiative. <http://www.wisconsinbirds.org/wp-content/uploads/2018/07/WBCI-Strategic-Plan-2018.pdf>). The WBCI activities that occur in the Driftless Area along the proposed CHC routes designed to conserve and restore endangered, threatened, and rare bird species and their habitats, would likely be affected by the proposed CHC.

The Driftless Area's tourism supports robust local economies comprised of hundreds of outdoor recreation based small businesses whose economic livelihoods would be affected along the proposed CHC routes (The Driftless Explorer, A Free Travel Guide to the Area https://issuu.com/newspublishinginc./docs/driftless_explorer_for_website_lowe).

VIII. NEED for the proposed CHC: Wisconsin law states that a reasonable need for additional electricity must be established before a transmission project can be sited and built. If that need is established, Wisconsin law then requires that it be met with energy conservation and efficiency methods first, followed by renewable energy sources such as wind and solar (Wis. Stat. 196.491 (3)(d) and Wis. Stat. 1.12(4)).

The purpose of an EIS is to identify potential environmental impacts, including cost, need, and other economic impacts. An EIS examines whether a project is in the public interest, and examines potential impacts to the land, flora, fauna, and water resources. It also evaluates if there are viable alternatives (WEPA/NEPA Code of Federal Regulations s.1506.1). **WGF requests that the PSC examine the need for the CHC using relevant cost/benefit analysis and studies that clearly lay out this need rather than relying on general statements in the CHC application**

(<https://psc.wi.gov/Pages/MajorCases/CardinalHickoryCreek.aspx>).

Ten year U.S. Energy Information Administration and Wisconsin PSC records show that Wisconsin electricity use has increased 0.1% per year while demand has dropped 0.4% per year (EIA Form 861 <https://www.eia.gov/electricity/data/eia861/> Table 4. Assessment of Electric Demand and Supply Conditions, Monthly Non-Coincident Peak Demands, MW, WI PSC Strategic Energy Assessment 2024). This trend is the result of increasing use of non-transmission alternatives, which cost far less than capital utility additions, and are twice as effective at reducing CO2. The Department of Energy recently determined that 50% of electricity generation associated CO2 reduction realized since 2005 resulted from non-transmission alternatives (<https://www.eia.gov/todayinenergy/detail.php?id=37392>).

EIS INVESTIGATION REQUEST: WGF requests that the PSC consider the need for the project and consider non-transmission alternatives. Cost and environmentally effective non-transmission alternatives include pole replacements, targeted load management, energy efficiency rebates to affected areas, and adding community solar to prolong the lifespan of transformers and conductors where possible. WGF also requests that the PSC compare CO2 emission impacts, comprehensive energy savings, comprehensive demand savings, costs from avoided or added natural gas generation and savings from avoided distribution/transmission infrastructure for the applicants' non-transmission alternative and the high voltage transmission project over 40 years.

IX. Conclusion: The proposed Cardinal-Hickory Creek high voltage transmission line has many potential impacts to the lands, waters, species, and quality of life in the Driftless Area. Wisconsin's Green Fire: Voices for Conservation requests that the PSC fully investigate all aspects of the proposed CHC, evaluate non-transmission alternatives, and recommend actions which best serve the needs of Wisconsin citizens into the future.

Thank you for the opportunity to provide these scoping comments on the EIS. If you have questions about these comments, please contact Kerry Beheler at Kerry.beheler@gmail.com.