

**Minnesota Department of Natural Resources
Division of Ecological & Water Resources
500 Lafayette Road
St. Paul, MN 55155-4040**

October 25, 2024

Lauren Agnew
Minnesota Department of Commerce
85 7th Place East, Suite 280
St. Paul, MN 55101

**RE: In the Matter of the Application of Birch Coulee Solar LLC for a Site Permit for the up to 125 MW
Birch Coulee Solar Project in Renville County, Minnesota**

Dear Ms. Agnew,

The Minnesota Department of Natural Resources (DNR) has reviewed the site permit application for Birch Coulee Solar LLC (Applicant) to construct a 125 MW solar array project (Project). Based on the review of the application, the DNR offers the following comments regarding potential environmental and wildlife impacts that should be considered in scoping for the Environmental Assessment (EA).

Security Fence

Section 3.4.8 of the permit application states that the Applicant will install a 7-foot woven wire security fence with 1-foot tensile smooth wire at the top along the perimeter of the Project site. The DNR recommends security fencing should reach a minimum height of 10 feet to prevent large wildlife, like white-tailed deer, from entering the facility which could cause harm or injury. Our agency recommends that the fence is designed in accordance with the DNR's *Commercial Solar Siting Guidance*. We appreciate that the permit application does not discuss installing barbed wire on top of the security fence.

Setback distances between the Project's perimeter and highway corridors should also be addressed in the EA. Section 4.5.7.1 of the permit application states that the Applicant will apply Renville County's minimum setback requirement of 67 feet to road rights-of-ways. Nearby roadways include County Highway 73 and Minnesota State Highway 19. While Renville County's setback requirement to road rights-of-way is greater than the DNR's minimum setback recommendation of 50 feet, the EA should analyze appropriate setback distances to ensure that the Project minimizes disruptions to wildlife

travel corridors. Wildlife travel corridors should be considered throughout the design and planning of the Project.

Dust

The EA should discuss measures to suppress fugitive dust during construction and once the solar facility is operational. Section 4.5.1.2 addresses the potential causes of fugitive dust at the Project site and the possible construction-related practices the Applicant will take to mitigate fugitive dust on unpaved areas. Specifically, the Applicant indicates they may suppress fugitive dust on unpaved areas by applying water or other dust control agents. Dust control agents applied during construction often contain calcium chloride or magnesium chloride. The DNR advises against using products that contain chloride as a dust suppression agent because they do not break down and may accumulate to levels that are toxic to fish, wildlife, and plants.

Lighting

The EA should discuss measures to mitigate lighting impacts associated with substations and inverters. Section 4.2.6.1 states that the Project will install pole-mounted downward facing lighting fixtures along the perimeter security fence, substation, O&M facility, and entrances and exits. Potential impacts related to illumination can be avoided or minimized by using shielding and downward facing lighting. The Applicant also plans to use motion lighting to minimize lighting disruptions at the facility.

Animals depend on the daily cycle of light and dark for behaviors such as hunting, migrating, sleeping, and protection from predators. In addition to the undesirable effects of upward facing lighting, the blue hue of lights can also affect wildlife. LED lighting has become increasingly popular due to its efficiency and long lifespan. However, LEDs tend to emit blue light, which can be harmful to birds, insects, and fish. The DNR recommends choosing products that emit the lowest levels of blue hue possible. Our agency also advises using luminaires with the lowest levels of backlight and glare possible. The Applicant should coordinate with the Minnesota Department of Transportation on Approved Products for Luminaries with respect to approved Uplight ratings and nominal color temperatures.

Bats

The EA should address tree removal restrictions to protect pups. Tree removal can negatively impact bats by destroying roosting habitat, especially during the pup rearing season when females are forming maternity roosting colonies, and the pups cannot fly. To minimize impacts on bat populations, the DNR recommends tree removal be avoided between June 1 through August 15.

Wildlife Friendly Erosion Control

The DNR recommends the EA discuss erosion control measures and stormwater runoff at the Project site. There is a private drainage system that flows through the southwestern end of the Project site and

outlets into the Minnesota River. Given the site's proximity to the Minnesota River, approximately 1.5 miles, the EA should discuss erosion control practices, including the Project's construction and vegetation reestablishment phases to minimize stormwater runoff into the drainage system. Additionally, the EA should address the use of wildlife friendly erosion control materials. Due to entanglement concerns for small wildlife, the DNR recommends that erosion control blankets are limited to "bio-netting" or "natural netting" types, and specifically avoid products containing plastic mesh netting or other plastic components. Hydro-mulch products may also contain synthetic (plastic) fibers and malachite green dye. The synthetic fibers and malachite green dye could make their way into the drainage system and enter the Minnesota River.

The DNR appreciates the opportunity to comment on the Birch Coulee Solar Project. If you have any questions about the DNR's comments, I may be reached at 651-259-5402 or martin.donovan@state.mn.us.

Sincerely,

/S/ Martin Donovan
Energy Review Planner

CC: Hayley Byron, Minnesota Department of Natural Resources
Samantha Bump, Minnesota Department of Natural Resources

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