

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

IN THE MATTER OF

NEW ENGLAND CLEAN ENERGY CONNECT)
L-27625-26-A-N/L-27625-TG-B-N/)
L-27625-2C-C-N/L-27625-VP-D-N/)
L-27625-IW-E-N)

ROGER MERCHANT PRE-FILED REBUTTAL TESTIMONY
ON BEHALF OF INTERVENOR NATURAL RESOURCES COUNCIL OF MAINE

I. Background

I, Roger Merchant, reside in Glenburn, Maine. I am a forester and forest photographer. I hold a Professional Forester License (#727) and have extensive forestry experience. From 1965-1972, I managed forestry operations on a 100,000-acre working forest. More recently, I retired after 32 years with the University of Maine Cooperative Extension, with program specializations in: 1) forestry and woodlot management, 2) environmental and outdoor education, 3) small business and community development, and 4) community-based natural resource and cultural heritage tourism. I also operate a photography business, Roger Merchant, Place-based Photography. As a forester and NAI Certified Interpretive Guide I have extensive experience interpreting aerial photographs and documenting forest conditions.

In the mid-1990s I developed an extensive slide image portfolio for the Maine Bureau of Parks and Lands (“MBPL”) illustrating their multiple-use approaches to forest management for then-Director Henry Whitemore. Beginning in 2018 in preparation for my testimony before the Department of Environmental Protection relating to CMP’s permit applications, I visited and photographed many sites of potential scenic and environmental value that will be adversely impacted by the NECEC. I have subsequently visited many of these sites throughout what is known as Segment 1 and have documented much of the clearing work done by CMP.

II. CMP wrongly asserts that there is no harm in allowing Project construction to continue

CMP submits the testimony of Thorn C. Dickinson that “[t]here is no harm in allowing Project construction to continue.” Dickinson Testimony at 19. To the contrary, allowing Project construction to continue when the Project cannot connect over the public lands will result in sections of unusable cleared corridor that will take decades to recover. This harm cannot, as Mr. Dickinson suggests, be properly mitigated through some hypothetical future “decommissioning plan.” *See id.* CMP likewise submits the testimony of Gerry Mirabile who also wrongly states that “no harm and no permanent alterations would result from allowing Project construction to continue” even if it cannot ultimately be built. Mirabile Testimony at 5-6. I offer the following testimony in rebuttal to those assertions.

III. CMP’s Clearing

Attached as Exhibit A are photographs I took of CMP’s corridor clearing. These photos show a corridor being cut up to 100 feet wide. This kind of corridor fragments the forest, as the pictures show, with significant environmental consequences. According to Michael Snyder, Forester and Commissioner of Vermont Department of Forest, Parks, and Recreation, “forest fragmentation is the breaking of large, contiguous forested areas into smaller pieces of forest; typically, these pieces are separated by roads, agriculture, utility corridors, subdivision, or other human development.”¹ Janet McMahon, M.S., further explains that “[h]abitat fragmentation occurs when habitats are broken apart into smaller and more isolated fragments by permanent roads, utility corridors, buildings, clearings or changes in habitat conditions that create discontinuities in the landscape. Research in Maine, the Northeast and around the world demonstrates unequivocally that fragmentation—whether permanent or temporary—degrades

¹ Michael Snyder, *What Is Forest Fragmentation and Why Is It A Problem?*, NORTHERN WOODLANDS (Oct. 13, 2014), <https://northernwoodlands.org/articles/article/forest-fragmentation>.

native terrestrial and aquatic ecosystems and reduces biodiversity and regional connectivity over time and in a number of ways.”²

Forest cover creates and sustains wildlife habitat, provides recreational opportunities, and timber products. Forests managed for timber harvesting continually produce trees for forest products, and are carefully managed to ensure that the forest remains capable of supplying timber while ensuring that sufficient forest cover remains. Forest fragmentation from these forest practices has a transitional—not a permanent—life. For example, when a clear-cut is created, that patch and its’ edges are open and obvious. Over time, natural or artificial regeneration fill in the harvested space and edges, so that the initial fragmentation and edge effects are mitigated or softened, as the new forest slowly and naturally grows and expands over time.

A transmission line like the NECEC is radically different: it opens up and alters forested landscapes permanently, which leads to disruptions for a variety of wildlife, their habitats and travel behavior. Forests managed for timber production and wildlife habitat in Maine depend upon a healthy diversity of species, a diversity of forest cover types, and a diversity of forest cover age-classes. Forest age-class diversity is generally categorized as young, middle-aged, and older forests. You don’t get timber production from any site in the forest until the young, then the middle aged to older aged stages of forest development have been achieved, by and through what we call ‘the annual growth of ongoing forest growing stock.’ A cleared powerline corridor will include a limited amount of younger trees and shrubs, and exclude middle-aged and older trees. Given the goal of powerline vegetation control is to limit the density and height of forest cover, this will limit forest cover on the cleared land to less diverse, young forest cover.

Powerline vegetation control excludes the middle and older stages in order to reduce and

² Janet McMahon, *The Environmental Consequences of Forest Fragmentation in the Western Maine Mountains*, MAINE MOUNTAIN COLLABORATIVE, 1 (2018), <https://mainemountaincollaborative.org/wp-content/uploads/2019/01/Environmental-Consequences-Forest-Fragmentation-2019-01-08-Web.pdf>.

eliminate tower and powerline entanglements with taller, older trees. Hence, corridor vegetation management reduces forest age-class and forest cover diversity, which in turn disrupts and impacts associated wildlife habitats and travel, both within the corridor and outside the permanently cleared corridor. There is thus a notable difference between the environmental effects on forests from managed timber harvesting versus a transmission line.

The deeply problematic nature of edge effects stemming from utility corridors in particular has been detailed in the literature, including by Janet McMahon, M.S.: “Edge habitat is typically windier, warmer, and drier than the forest interior (Hunter and Gibbs 2007). The extent of this ‘edge effect’ is greater along high contrast edges—such as between a utility corridor and a forest, than along low contrast edges—such as between a regenerating clearcut and adjacent uncut forest . . . The habitat lost or altered by edge effects can be many times greater than the footprint of the fragmenting feature itself (Laurance *et al.* 2017; Harper *et al.* 2005; McGarigal *et al.* 2001; Tinker *et al.* 1997).”³

As a forest photographer who explores off-trail and recreates on public reserved lands, I’ve spent decades taking the road less traveled, seeking out Maine’s most remote places. It’s hard to find a more remote, beautiful region than the Western Maine Mountains. I recreate in this area to enjoy its pristine beauty far away from development. Some of my best landscape photography comes from the Kennebec and Upper Moose River Basins. Although CMP characterizes these lands as low-value working forests, the scenic truth is that visual impacts from temporary timber harvesting, differs greatly from the blatant in-your-eyes permanent visual impacts of a new power transmission line, cutting across all forests from the Quebec border to Lake Moxie.

³ McMahon, *supra* note 2, at 17.

This harm from clearing and construction is not adequately mitigated by a decommissioning plan. Currently, CMP cannot connect the NECEC across the public lots. Given the significant and permanent impacts of a utility corridor like NECEC, the Department should not allow CMP to continue to clear its corridor and erect poles and wires unless or until it has a definitive, fully permitted alternative route. To do otherwise would allow for the creation of two corridors with the significant impacts described above instead of one. Although the corridor ultimately not used eventually will regenerate, that process will take well over 30 years before the lands regain their current forested values, with substantial scenic and environmental harm during caused during those decades. The people of Maine deserve better.

IV. CMP has failed to identify a permittable alternative

This section of my testimony addresses CMP's testimony by Thorn Dickinson concerning possible alternative routes. Dickinson Testimony at 9-10. Although CMP asserts that "there are possible re-routing alternatives that could be implemented," his testimony fails to identify how these so-called possible re-routes could in fact be implemented.

As Jeff Reardon's testimony demonstrates, Option 2 is simply unavailable because of the Moosehead Region Conservation Easement, which is directly east of the public lots. Option 1 is not identified in any meaningful way and, to the extent it can be roughly located, faces too many challenges for the Department to assume it can simply be substituted for the current route.

CMP, moreover, has not shown that it has acquired the necessary property interest—or that it can—to use a route west of Route 201, nor how it will be able to navigate through numerous conserved lands, critical streams like Salmon Stream, or cross the Dead and Kennebec Rivers. Among the obstacles to permitting this route are the following:

1. Option 1 requires two river crossings, the Kennebec and the Dead. The Dead is a unique regionally and nationally recognized white water river, particularly for canoeing, with periodic high releases over the season for kayaks and rafts. One could anticipate a significant reduction in place-based scenic quality given the proposed crossings in the West Forks area.

2. Option 1 tracks north of the Dead River to the existing corridor south of Johnson Mountain, presenting impacts related to forest and habitat fragmentation. As described above, the fragmentation of forest cover by a permanently cleared power line corridor is distinct and different from the temporal forest fragmentation as a result of forest practices. The first - CMP - is permanent, forever; the other - harvesting - is not, as the forest regenerates, grows and develops within the cutover forestland.

3. The permanent fragmentation in Option 1 is further complicated by the adjacent, already-existing, permanent fragmentation created by cleared, paved Route 201 between West Forks and Johnson Mountain. From a forest and habitat landscape perspective the adjacent, parallel presence of yet another permanently cleared corridor - CMP's + Route 201 - will magnify habitat and associated edge effect impacts, as a result of the permanent CMP corridor and permanent Route 201.

Critical reviews of forest and habitat fragmentation in Maine concur on the point that expanding permanent forest fragmentation and subsequent re-fragmentation magnifies impact effects and environmental concerns about how this contributes to forest habitat degradation. Option 1 appears to mirror this problem, as was the case with CMP's proposed "quad fragmentation" of the Bureau of Parks and Lands Johnson Mountain and West Forks Plantation lots.

4. Although the exact route of Option 1 is unclear, an important trout stream, Salmon Stream, is in the vicinity of what appears to be CMP's proposal. Option 1 north from the Dead to the Johnson Mountain connection threatens these fragile trout waters. USGS topo maps reveal that all waters flowing into the entire east-side of the reach of Salmon Stream, are closely bounded by the Route 201 watershed divide. This raises concerns about the impact a cleared corridor between Route 201 and Salmon Stream will have on water quality and water temperature, which brook trout are highly sensitive to.

Given the likelihood that CMP will be unable to use the public lands they need to complete the currently-permitted route, in the absence of a permitted, or at least a route that clearly could be permitted, it would be environmentally irresponsible to allow work on this project to continue.

I, Roger Merchant, affirm that the above statements are true and accurate to the best of my knowledge and belief.

10/08/2021

Date: _____

A handwritten signature in black ink, appearing to read "Roger Merchant", written over a horizontal line.

Roger Merchant

Exhibit A



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