Maine Department of Energy Resources

Via email: doer@maine.gov

June 16, 2026

Re: Transmission Planning Study Stakeholder Comments Pursuant to Resolve 2025, Ch. 57

To the Department of Energy Resources:

Preserve Rural Maine (PRM) appreciates the opportunity to comment on the Transmission Infrastructure Study being conducted pursuant to Resolve 2025, ch. 57. We recognize the significant effort the Department and the stakeholder group have put into this process, and we offer the comments below in the spirit of strengthening the study's usefulness to policymakers, regulators, and the communities that will be affected by its outcomes.

Maine has an important place in the world. The fresh air, abundant nature, and relaxed pace draw over 14 million visitors a year.[1] With over 17 million acres of forest land, over 1.3 million acres of agricultural land, the lowest population density in New England, and more than 32,000 miles of rivers and streams, Maine's ecology and way of life are worth protecting. While our larger cities serve as essential centers for commerce, higher education, specialized healthcare, and diverse job markets, it is our small towns and rural communities that preserve Maine's culture and sense of belonging. These communities are often underrepresented in policy making and legislative activities. This is the reason Preserve Rural Maine exists: to preserve the communities, cultures, and environmental integrity of rural Maine.

Maine's policy goals and energy plans are important to the future of our state. With electricity demand projected to double by 2050, planning for the infrastructure to support that demand must be a priority. For this reason, PRM strongly supported the legislative action that required this study.

Sequencing of the Current Transmission Procurements

There are currently two major transmission procurements underway in Maine ahead of the completion of this study. It is PRM's view that proceeding with these procurements before the study is complete is premature and irresponsible. Following this path invites the state to risk major infrastructure decisions before the analysis intended to inform those decisions – including the cost-benefit comparison of HVAC, overhead HVDC, and buried HVDC required by the Resolve – is available.

PRM recommends that, at a minimum, final decisions on these procurements be paused until the study is complete, its findings have been reviewed by the relevant agencies and stakeholders, and any resulting action items have been addressed. We recognize this may fall outside DOER's direct authority, but interagency coordination on this point would go a long way toward building public confidence that Maine's transmission decisions are being made on the basis of complete information.

[1] Megan Gray, "Who Visited Maine in 2025, and How Much Did They Spend?" *Portland Press Herald* (May 8, 2026). https://www.pressherald.com/2026/05/08/who-visited-maine-in-2025-and-how-much-did-they-spend/

Transmission Planning, Siting, and Community Engagement

As discussed during the stakeholder meetings, new and upgraded electrical transmission infrastructure in Maine generally originates through one of three pathways: state-led procurement (Maine Policy-Driven Procurement), procurement led by another state (non-Maine Policy-Driven Procurement), or the ISO New England Planning Process.

While each of these pathways serves an important function, many transmission proposals originate in response to generation interconnection requests, market opportunities, reliability concerns, and/or policy objectives. As a result, transmission planning often begins with assumptions about future infrastructure needs rather than a comprehensive evaluation of all available alternatives. This approach can narrow consideration of lower-impact, lower-cost, or more broadly supported solutions.

PRM believes that transmission planning should begin with a clear assessment of need and a transparent evaluation of alternatives to new greenfield corridors. Such alternatives may include energy efficiency, demand response, distributed generation, energy storage, grid-enhancing technologies, advanced conductors, upgrades within existing corridors, and strategic undergrounding.

Project approval in Maine can involve review by the Public Utilities Commission, the Office of the Public Advocate, the Department of Environmental Protection, the Land Use Planning Commission, municipalities, federal agencies, and in some cases the Legislature. While each of these processes provides opportunities for public participation, many residents remain unaware of proposed projects until major decisions have already been made or significant investments have already occurred.

Several studies referenced during the stakeholder process highlight the importance of engaging communities early. As one study cited by EEE noted, conflicts can often be reduced when community members are included in discussions about location, design, mitigation measures, and project benefits before key decisions are finalized.[2]

PRM agrees that meaningful public engagement should occur early and often. But it should not be limited to agency coordination and stakeholder discussions. Residents, landowners, municipalities, and affected communities should be informed and engaged before routes are selected, permit applications are submitted, and major project decisions are made. Providing timely information, respecting local ordinances, and ensuring equitable treatment of private property owners would significantly improve public confidence in transmission planning.

Integrated Planning and Future Transmission Needs

The Resolve directs the study to review existing analyses of future transmission needs in Maine. PRM believes this review should explicitly acknowledge that several major planning efforts remain incomplete, including:

- Maine's Integrated Grid Planning process
- CMP's Long-Term System Plan updates
- Versant Power's planning processes
- ISO New England's Long-Term Transmission Planning (LTTP) process

[2] Lawrence Susskind *et al*, "Sources of Opposition to Renewable Energy Projects in the United States," *Energy Policy* 165 (June 2022): 1-17. https://www.sciencedirect.com/science/article/pii/S0301421522001471#sec5

- Studies of future electric demand, including ongoing uncertainty about the location and scale of future large electric loads such as data centers.

Future electricity demand projections are frequently cited as justification for major transmission investments, but those projections rest on assumptions about electrification, industrial development, economic growth, energy policy, and emerging industries – including transportation and building electrification, hydrogen production, and data center growth. Different assumptions can produce significantly different transmission requirements.

Furthermore, proactive planning for the locations of both generation and storage resources will be instrumental in addressing future transmission requirements. This approach will also support ISO New England in its Loss of Source study. This planning could also include potential Points of Interconnection (POI) along the Maine coast to support Gulf of Maine offshore wind and, potentially, Eastern Canada renewable energy.

PRM recommends that the study carefully evaluate the range of plausible demand scenarios and identify which transmission investments remain necessary across multiple futures, rather than relying on a single forecast. Long-lived infrastructure decisions should be grounded in completed planning processes and transparent analysis, not assumptions that may change substantially over time. Specifically, we believe the study should address:

- Which demand forecasts are being relied upon, and what assumptions underlie them?
- Which scenarios include, and which exclude, data center development?
- What transmission needs remain under low-growth scenarios?
- What mix of generation and storage is anticipated to meet Maine's energy goals – and separately, what mix is anticipated to come from or pass through Maine to meet the rest of New England's goals?
- Based on that generation and storage mix, what are Maine's actual future transmission needs?
- What alternatives or other technologies could reduce demand or the need for new transmission entirely?

We note that several stakeholder presentations appeared to treat load growth projections as fixed and inevitable. The Department's own 2027 Maine Energy Plan process will be grappling with many of these same questions, and we encourage close coordination between the two efforts.

Transmission Routing, Public Lands, and Existing Corridors

On April 22, 2024, LD 2087 was signed into law.[3] Among other provisions, it directed the Bureau of Parks and Lands to establish rules governing the crossing of rail trails, recreational trails, and similar public lands by transmission infrastructure. To date, this rulemaking has not been completed.

PRM recommends that this rulemaking be finalized before major transmission routing decisions are made. The absence of clear criteria creates uncertainty for planners, regulators, municipalities, and landowners alike.

[3] LD 2087, An Act to Protect Property Owners by Making Certain Changes to the Laws Governing the Use of Eminent Domain by Transmission and Distribution Utilities" (State of Maine, 131st Legislature, 2024). https://legislature. maine.gov/legis/bills/getPDF.asp?paper=SP0880&item=3&snum=131

Allowing the use of appropriate public corridors may reduce costs, minimize impacts on private property owners, and provide more direct routing opportunities. Where preservation of viewsheds or recreational experiences is a priority, strategic undergrounding may provide a practical solution that balances infrastructure needs with public use and environmental considerations.

More broadly, reviewing regulations and legislation at the state, regional, and federal level may be needed to encourage or require joint use of existing transmission, energy, and transportation corridors on both public and private lands.

Maine previously designated statutory energy corridors along Interstate 95, Interstate 295, and the Searsport-Loring corridor for siting energy infrastructure. Although these provisions expired in 2015, the underlying concept remains directly relevant to this study.

A 2024 feasibility study on use of transportation corridors for other infrastructure, conducted in Minnesota, offers several relevant findings:[4]

- *Buried HVDC transmission lines have significantly less impact on the environment than overhead transmission lines.* (Findings, p. 11)

- *The traditional thorny issue of building linear infrastructure on private property can be mitigated with undergrounding the transmission along existing highway and rail corridors. Burying HVDC transmission can be done at a similar cost to conventional overhead AC transmission while providing critical reliability and resilience benefits. Furthermore, the potential for accelerated permitting timelines for buried transmission projects would be worth billions of dollars in avoided carbon emissions.* (Conclusion, page 78)

- *The findings from this study demonstrate that buried HVDC transmission is cost-effective and can be feasibly sited in interstate and highway ROW after making appropriate consideration of existing and future transportation system needs. While the study identified challenges, none appear to pose insurmountable barriers.* (Conclusion, page 78)

The use of established corridors can reduce impacts on undeveloped lands, minimize conflicts with private property owners, and simplify permitting. It may also create opportunities for technologies such as buried HVDC transmission that can coexist with transportation infrastructure. Federal regulation 23 CFR 645.205 recognizes that placing utility facilities within existing highway rights-of-way is in the public interest.[5]

PRM recommends that the study evaluate whether Maine's statutory corridor framework should be reinstated and expanded to include existing transportation corridors, active and inactive railroad corridors, and existing transmission rights-of-way.

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[4] *NextGen Highways Feasibility Study for the Minnesota Department of Transportation: Buried High-Voltage Direct Current Transmission* (NextGen Highways, 2024). https://nextgenhighways.org/wp-content/uploads/2024/02/NexGen-Highways-Analysis-Report-2.1.24.pdf

[5] Utility Facilities, 23 C.F.R. § 645.205. https://www.ecfr.gov/current/title-23/chapter-I/subchapter-G/part-645/subpart-B/section-645.205

HVAC Versus HVDC: A Comprehensive Cost-Benefit Analysis

The Resolve specifically directs the study to conduct a cost-benefit analysis comparing buried HVDC transmission with overhead HVAC and overhead HVDC alternatives. PRM is concerned that portions of the stakeholder discussions have focused primarily on upfront construction costs rather than the full cost-benefit evaluation the Resolve contemplates. Construction cost is an important factor, but only one component of a complete analysis.

A complete evaluation should also consider:

- Visual and scenic impacts
- Forest fragmentation and habitat impacts
- Property value effects
- Resilience to severe weather
- Reliability and outage risk
- Public acceptance
- Permitting complexity
- Impacts to agricultural and working forest lands
- Potential use of existing transportation corridors
- Long-term operation and maintenance costs
- Transmission losses over long distances
- Avoided reactive power equipment
- Submarine HVDC

Recent ISO New England LTTP proposals demonstrate that the cost differential between overhead HVAC and projects incorporating buried HVDC may be significantly smaller than is often suggested in public discussions. PRM recommends that the study evaluate buried HVDC using current project data rather than older cost estimates, and conduct an objective, transparent comparison of overhead HVAC, overhead HVDC, and buried HVDC using both lifecycle costs and measurable public benefits – without presuming in advance which technology is preferable.

Local Ordinances and Home Rule

Local ordinances are often overlooked in transmission siting discussions. In recent years, a number of Maine municipalities have adopted transmission line siting ordinances. While these vary in their specific requirements, most require that any transmission line built within the municipal limits must be buried or meet stringent viewshed requirements. The study should account for this existing and growing body of local regulation when evaluating siting feasibility and timelines.

Environmental Justice and Socioeconomic Considerations

The impacts of major transmission infrastructure are not distributed equally. Rural communities often host infrastructure that primarily benefits larger population centers while bearing a disproportionate share of the visual, environmental, economic, and social impacts.

The study should evaluate how transmission siting decisions affect rural and low-income residents, working forests, agricultural operations, and communities with limited capacity to participate in lengthy regulatory proceedings. Meaningful consideration of environmental justice requires more than

identifying impacts. It requires empowering affected communities to have a voice in decisions that will shape their future for generations.

Public Health and Safety

A comprehensive study encompassing siting, planning, and community engagement must take into account public health and safety concerns. These concerns include electromagnetic fields (EMF), the corona effect, and the risk of wildfires. Furthermore, agricultural considerations should address EMF, magnetic flux, the potential impact on bee populations, and stray voltage, particularly in proximity to dairy cows, horses, and other livestock.

PRM requests that mitigation of these concerns be included in the final report of this study.

Real Estate Values Near Transmission Lines

PRM has reviewed the real estate value study referenced by the consultant (EEE), "A Method to Estimate the Costs and Benefits of Undergrounding Electricity Transmission and Distribution Lines" (Lawrence Berkeley National Laboratory). That study cites a separate paper (Des Rosiers, 2002) and reports a property value impact range of –5% to –20% for homes with a direct view of transmission infrastructure. The original Des Rosiers abstract, however, reports impacts ranging from –5% to in excess of –20%.[6] We believe this distinction is meaningful, and we would encourage the study team to revisit the original source.

It is also worth noting that the Des Rosiers study examined a densely populated area already bordered on three sides by highways and near a major city – conditions that are not representative of the majority of rural Maine, where transmission impacts on otherwise undeveloped land may be more pronounced rather than less.

Other studies are more directly relevant to Maine's rural context. A study of a rural county in South Carolina found that lots adjacent to power lines sold for 44.9% less, lots within 1,000 feet sold for 17.9% less, and lots within the viewshed of a transmission tower sold for 22.1% less than comparable lots outside the power line corridor or viewshed.[7] Even James Chalmers, whose studies are paid for by utility developers, could not ignore the fact that for properties within 100 feet of an existing high-voltage transmission line right-of-way with clear or partial visibility of the structures, the probability of a measurable sale price effect ranges from 46% to 59%, depending on visibility.[8]

These value impacts matter beyond the individual property owner. They affect local tax assessments and represent a real diminution in net worth that is rarely fully compensated. They can also trigger mortgage-related consequences: when an easement is placed on a mortgaged property, the mortgage

[6] F. Des Rosiers, "Power Lines, Visual Encumbrance, and House Values," *Journal of Real Estate Research* 23, no. 3 (2002): 275-301. https://www.researchgate.net/publication/5142167_Power_Lines_Visual_Encumbrance_and_House_Values_A_Microspatial_Approach_to_Impact_Measurement

[7] David Wyman and Chris Mothorpe, "The Pricing of Power: A Geospatial Approach to Measuring Residential Property Values," *Journal of Real Estate Research* 40, no. 1 (2018): 121-154. https://www.tandfonline.com/doi/abs/10.1080/10835547.2018.12091490

[8] James Chalmers, "High-Voltage Transmission Lines and Residential Property Values in New England: What Has Been Learned," *The Appraisal Journal* (2019). https://www.thefreelibrary.com/High-Voltage+Transmission+Lines+and+Residential+Property+Values+in...-a0612802081

holder must be notified, and the property owner may be required to make a payment to the lender to restore the original loan-to-value ratio. The study should account for these downstream costs, which are often borne entirely by the property owner.

Loss of Source Limit

Interregional planning and loss-of-source scenarios should be evaluated before committing Maine ratepayers and communities to a major transmission buildout. Increasing the single loss-of-source limit could reduce the number of individual transmission lines or the scale of transmission corridor expansion needed. We note that a study initiated by ISO New England to raise this limit was terminated due to lack of funding,[9] and we recommend the study team consider whether this work should be revisited.

Community Benefit Packages

Community benefit packages are often presented as a way to compensate host communities for the burdens of new infrastructure, but in practice they may fall short of — or even work against — their stated purpose.

One underexamined issue involves Maine's school funding formula. Under the Essential Programs and Services (EPS) model, the state calculates each municipality's required local contribution to education costs based in part on its total property valuation. As a municipality's valuation increases, its state education subsidy typically decreases and its required local contribution increases. This dynamic applies to any new taxable property, not just transmission infrastructure. It means that when high-voltage transmission lines are added to a town's tax base, a portion of the new tax revenue may be offset by a corresponding reduction in state education aid — leaving the net fiscal benefit to the community smaller than it first appears. A community benefit package that does not account for this offset does not deliver a genuine net benefit.

A second issue involves Tax Increment Financing (TIF) districts, which are a common vehicle for structuring community benefits from large infrastructure projects. TIF districts allow municipalities to capture increased tax revenue from new development and direct it toward designated purposes — and importantly, TIF-captured value is excluded from the EPS valuation calculation, which helps protect a town's state education funding. However, establishing and administering a TIF district requires legal, financial, and planning capacity that many small rural municipalities lack.

The State Revenue Sharing formula is also impacted by a municipality's total valuation.[10]

Title 35-A, Section 3454 provides a minimum community benefits package for grid-scale wind energy development, but it is limited to the actual wind turbines.[11] PRM recommends establishing a minimum community benefits package for the supporting transmission lines, allowing municipalities to customize it to their specific needs.

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[9] Pradip Vijayan, *Interregional Study Update: Increasing New England Loss of Source Limit: December 2025 IPSAC Update* (Dec. 2025). https://www.iso-ne.com/static-assets/documents/100030/a02_2025_12_05_ipsac_iso_loss_of_source.pdf

[10] https://www.maine.gov/treasurer/revenue-sharing/monthly-distributions/calculate-revenue-sharing

[11] Title 35-A, §3454: Determination of tangible benefits; requirements

The study should examine whether existing community benefit frameworks actually deliver a net positive outcome to host communities once these fiscal offsets and administrative barriers are accounted for.

Other Considerations for the Study Team

PRM raises the following additional items for the study team's awareness:

- Ambient Adjustment Ratings (AAR): Implementation of Ambient Adjustment Ratings for transmission lines, required under FERC Order No. 881 (Managing Transmission Line Ratings), has been delayed by ISO New England until the end of 2026 due to software development delays. The study should consider how this delay affects near-term transmission capacity assumptions.

- Revised wind capacity factors: ISO New England recently revised its winter peak capacity factor assumptions for onshore and offshore wind. The study should evaluate how this revision affects projected generation, storage, and transmission needs in Maine, and whether it changes the cost-benefit calculus for proposed new transmission, generation, and storage.

- Power Advisory white paper: We would direct the study team's attention to the June 2026 Power Advisory white paper, "High Voltage, High Stakes: Building the Grid New England Needs," which addresses near- and intermediate-term grid needs with a substantial focus on Maine.

- Brattle Group's presentation on Interregional Transmission Planning with HVDC: https://www.brattle.com/wp-content/uploads/2024/03/Interregional-Transmission-Planning-with-HVDC.pdf

Conclusion

PRM believes the purpose of this study is not simply to identify ways to build transmission infrastructure more quickly. It is an opportunity to determine what infrastructure is truly needed, where it should be located, how impacts can be minimized, and how Maine can meet its future energy needs while preserving the communities, natural resources, and quality of life that make our state unique.

We encourage the study team to remain focused on the language and intent of the Resolve, particularly its directives related to public engagement, corridor utilization, emerging technologies, and the comprehensive evaluation of alternatives. We believe the recommendations arising from this study should be grounded in completed planning processes, transparent public participation, and a full accounting of both costs and benefits.

Thank you for the opportunity to comment, and for the Department's continued work on this important study. PRM would welcome the opportunity to discuss any of the points raised above further.

Respectfully submitted,

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