STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Case No. 26-0096-TF

Tariff filing of Green Mountain Power Corporation for a 7.5% rate increase effective with bills rendered on or after October 1, 2026	

PREFILED DIRECT TESTIMONY OF
MICHAEL E. IVEY
ON BEHALF OF THE
VERMONT DEPARTMENT OF PUBLIC SERVICE

April 20, 2026

Summary: Mr. Ivey offers recommendations concerning the area of pole inspection procedures that could impact efficient use of pole materials and GMP's ongoing resiliency efforts.

Mr. Ivey Sponsors the Following Exhibits:

Exhibit DPS-MEI–1	Professional Resume of Michael E. Ivey
Exhibit DPS-MEI-2	Discovery Response DPS.GMP.2-69

PREFILED DIRECT TESTIMONY OF MICHAEL E. IVEY

Q1. Please state your full name, address, and occupation.

A1. My name is Michael E. Ivey. My business address is 1850 Parkway Place, Suite 800, Marietta, Georgia 30067. I am a Senior Project Manager at GDS Associates, Inc. ("GDS").

Q2. Please outline your formal education.

A2. I earned a Bachelor of Science in Engineering, Specialization: Electrical from Mercer University in 1994.

Q3. Please state your professional registrations.

A3. I am a Licensed Professional Engineer and Licensed Electrical Contractor in the state of Georgia.

Q4. Please state your professional experience.

A4. I have been an engineering consultant for utilities since 1994 with experience in the operation, maintenance, and design of substations, transmission lines, and distribution lines as well as in rate design, cost of service, and financial analysis. I also worked as an Engineer, Technical Service Manager, Assistant Manager, and General Manager at the Crisp County Power Commission in Georgia where I managed and oversaw utility operations that included hydro, coal, and natural gas generation pipeline and facilities, transmission and distribution facilities, finance and retail billing operations. I came to GDS as a Senior Project Manager in 2023. During my time at GDS I have provided, among other projects, classes on system design, staking and inspection, and engineering analysis; support for distribution system design, operation, and construction, generation interconnects, and reliability and resiliency projects; and presentations and assistance with

regulatory testimony.

Q5. Have you testified in Vermont in the past?

A5. No.

Q6. Have you testified before any other regulatory commissions?

A6. Yes. I have submitted testimony before the Public Utility Commission of Texas.

Q7. What are your qualifications to provide testimony before the Commission?

A7. I have 32 years of experience working and consulting in the utility industry, mainly with electric utility systems. My experience and expertise cover supply, generation, substation, transmission and distribution engineering, utility management, budgeting, financing, costs and rates. I have assisted electric utilities in the design, construction, modeling, analysis, and planning of their electric systems. This work included development of system protection, interconnections, reliability improvements, and system upgrades. I have worked for multiple electric utilities across the country with varying system designs and operations. I also served as general manager for a utility with generation, transmission, and distribution assets. My professional resume is attached as **Exhibit DPS-MEI–1**.

Q8. Please describe GDS.

A8. GDS is an engineering and consulting firm with offices in Marietta, Georgia; Austin, Texas; Auburn, Alabama; Folsom, California; Bedford, New Hampshire; Redmond, Washington; Augusta, Maine; and Madison, Wisconsin. GDS has over 185 employees with backgrounds in engineering, accounting, management, economics, finance, and statistics. GDS provides rate and regulatory consulting services in the electric, natural gas, water, and telephone utility industries. GDS also provides a variety of other services in the

electric utility industry including power supply planning, generation support services, financial analysis, load forecasting, and statistical services. Our clients are primarily publicly owned utilities, municipalities, customers of privately owned utilities, groups or associations of customers, and government agencies.

Q9. For whom are you appearing?

A9. I am testifying on behalf of the Department.

Q10. Were your testimony and exhibits prepared by you or under your direct supervision and control?

A10. Yes, they were.

Q11. Please summarize the purpose of your testimony

A11. I was asked to review the capital expenditures for transmission, substation, distribution, generation, and transportation. My review was focused on the prudency of each project and the associated estimated cost.

Q12. Can you please summarize your testimony?

A12. Yes. My testimony addresses a concern with how wooden poles are being inspected and classified as needing rehabilitation or replacement. GMP's current inspection/classification method does not appear to follow National Electric Safety Code ("NESC") guidelines.

Q13. What are wood pole inspections?

A13. Wood pole inspections are field visits to poles to determine if there are condition or use concerns that need to be addressed. The main parts of a wood pole inspection program include:

a. Identifying decay and defects;

b. Estimating the pole's remaining strength; and

c. Applying effective remedial treatments, if necessary.

Q14. Are there any concerns with GMP's current inspection method?

A14. Yes. There is a concern with how wooden poles are being inspected and classified as needing rehabilitation or replacement. GMP's current method does not appear to follow NESC guidelines and may lead to inefficiency or a weakened system by either replacing a pole that still has sufficient strength or not replacing a pole that has deteriorated below desired strength.

Q15. What inspection criteria are currently used?

A15. Based on GMP's response to Q.DPS.GMP.2-69, provided as **Exhibit DPS-MEI-2**, it appears that the service provider, Osmose, is calculating the remaining strength of a pole based on the pole class and not the construction grade: "Osmose pole strength calculation relates to pole class specifically, not the total structure construction grade."

Q16. What does a pole's class indicate?

A16. A pole's class is an indicator of the width of the pole, with wider poles yielding additional strength. The lower the class number, the bigger the pole.

Q17. What does pole deterioration mean?

A17. A pole can deteriorate in multiple ways, including: top rot (exposed end-fiber weathering); woodpecker holes; cracking; environmental damage; groundline decay; internal voids; etc. Most decay occurs near the groundline due to moisture changes near the ground's surface. Groundline decay and voids reduce the strength of the wood fibers within the pole.

Q18. How does decay affect the pole's strength?

A18. A pole's strength tends to reside more in its outer layers, and a small decay percentage can lead to a large loss in strength. The wood pole bending capacity is given by Capacity = 0.000264 * Fiber Stress * Circumference^3, and that means the strength is a function of the remaining non-decayed wood circumference cubed. The difference in strength from a non-decayed pole and a decayed pole can then be given by: 1 - %non-decay^3. For example, the following calculations I made in **Figure MEI-1** below show the strength loss for different decay percentages:

1) 5% decay = 1 – 0.95%^3 = 14.3% strength loss
2) 10% decay = 1 – 0.90%^3 = 27.1% strength loss
3) 15% decay = 1 – 0.85%^3 = 38.6% strength loss

Figure MEI-1

Q19. How does the NESC address pole strength and deterioration?

A19. NESC Section 25 addresses the strength requirements for different loading conditions and grades of construction.

Q20. Can you give more detail on the rules in NESC Section 25?

A20. Yes. Rules 250B, 250C, and 250D from Section 25 are the main rules governing pole strength and deterioration for the construction grades B and C defined in NESC Section 24. Under Section 25 of the NESC, there are rules for oversizing wood poles to allow for deterioration. This includes rules for when the poles should be rehabilitated or replaced.

Q21. What are the construction grades?

A21. There are three construction grades given in NESC Section 24: B, C, and N in order of strength with B being the highest. Grade C is the most commonly used. Grade B is used for areas needing higher strength, like railroad and water crossings, higher voltages, and when designing

for increased resiliency. Grade N is the weakest strength and rarely used except for private lines, low voltage, and some communications lines. Most electric utilities use grade C or better.

Q22. Please discuss the NESC Rule 250B criteria for grade C.

A22. Under NESC Rule 250B, grade C construction requires a rated strength reduction of 85% of initial strength to allow for deterioration. For grade C construction, this means poles are installed at 1/85% or 117.65% stronger than the calculated load with safety margins. They are required to be rehabilitated or replaced when the pole has decayed to 2/3 of the initial requirement which is when the pole reaches 117.65% * 2/3 = 78.43% of the initial load with safety margins.

Q23. Please discuss the NESC Rule 250B criteria for grade B.

A23. Under NESC Rule 250B, grade B construction requires a rated strength reduction of 65% of initial strength to allow for deterioration. For grade B construction, this means poles are installed at 1/65% or 153.85% stronger than the calculated load with safety margins. They are required to be rehabilitated or replaced when the pole has decayed to 2/3 of the initial requirement which is when the pole reaches 153.85% * 2/3 = 102.56% of the initial load with safety margins.

Q24. Are there NESC rules dealing with extreme wind and ice?

A24. Yes. NESC Rule 250C (Extreme Wind) and Rule 250D (Extreme Ice with Concurrent Wind) are applied for designs that consider extreme wind and extreme ice and incorporate increased loading with safety margins. These sections are primarily used for designing for infrastructure reaching above 60 feet or for enhancing resilience in areas prone to severe weather. These NESC sections include rules for oversizing wood poles to allow for deterioration and rules for when the poles should be rehabilitated or replaced.

Q25. How do the NESC Rules 250C and 250D address pole strength and deterioration?

A25. Under NESC 250C and 250D, both grade B and C construction requires a rated strength reduction of 75% of initial strength to allow for deterioration. This means poles are installed at 1/75% or 133.33% stronger than the calculated increased loads with safety margins. They are required to be rehabilitated or replaced when the pole has decayed to 3/4 of the initial requirement which is when the pole reaches 133.33% * 3/4 = 100% of the initial increased loads with safety margins.

Q26. Do all poles meet the minimum strength requirements at installation?

A26. Utilities will do their best to ensure that a pole meets at least the minimum requirements of the NESC at the time of installation, and I believe GMP is meeting the requirements at installation.

Q27. Is it typical for utilities to install all poles based on the smallest class pole required?

A27. Not always. Sometimes, the difference in cost for a bigger, stronger pole is minimal, and it can be more efficient operationally to stock the bigger poles to consolidate inventory and ease material deployment. There is also a benefit of gaining some additional pole life due to the pole starting out stronger than the minimum design requirement. All poles in the field should meet the minimum requirements, and sometimes they can exceed the minimum requirements.

Q28. So how does GMP's current practice of rejecting a pole for 67% strength based on pole class affect the system?

A28. For resilience designs or areas where extreme wind or ice is included, the pole should retain 3/4 of its original strength, not 2/3. Based on GMP's discovery responses on this topic, the poles are flagged for rehabilitation or replacement when the pole strength has deteriorated to 2/3 of its original strength based on class alone. This would mean structures designed for extreme wind

and ice as part of location or similar storm hardening efforts would be allowed to fall below desired strength. This would also mean any oversized poles would be replaced too early and result in an inefficient use of materials because the additional life that was present by using an oversized pole would be lost.

Q29. Do you have a recommendation?

A29. Yes. I recommend that the wooden poles be checked against a strength calculator based on design parameters rather than just observed pole class. Design and strength calculation packages are portable, and calculations can be quickly made in the field or back at the office.

Q30. Does this conclude your direct testimony?

A30. Yes, with the reservation of the right to supplement my testimony based on any discovery responses not yet received, if necessary.