STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Case No. 25- ____-PET

Limited Size and Scope Application	)
of Vertex Towers, LLC and Bell Atlantic Mobile	)
Systems, LLC d/b/a Verizon Wireless, for a Certificate	)
of Public Good, pursuant to 30 V.S.A. § 248a,	)
Authorizing the construction of a Telecommunications	)
Facility in Rochester, Vermont	)

PREFILED DIRECT TESTIMONY OF MARTIN J. LAVIN

ON BEHALF OF VERTEX TOWERS, LLC AND BELL ATLANTIC MOBILE SYSTEMS, LLC, D/B/A VERIZON WIRELESS

November 19, 2025

Summary:

Mr. Lavin's testimony will address the proposed installation and how the Project will promote the general good of the State of Vermont.

Q1. Please state your name, employer and current position.

A1. My name is Martin J. Lavin, and I am a Senior Radio Frequency ("RF") Engineer currently working for C Squared Systems, LLC.

Q2. Please state briefly your educational and professional background.

A2. I have worked as an RF engineer for C Squared Systems, LLC since June of 2008. I have worked as an RF Engineer since November of 1987. My responsibilities as an RF engineer at C Squared Systems include the following:

- Zoning Hearing Expert Testimony
- Advanced Wireless Services RF System Design
- Wireless Broadband Access Systems Engineering
- RF Drive Test Services
- Intermodulation Studies
- RF Exposure and FCC Compliance Studies

I have a Bachelor of Science Degree from Rensselaer Polytechnic Institute and a Master of Business Administration Degree from University of New Hampshire.

Q3. Have you ever testified before the Public Service Board or Public Utility Commission?

A3. Yes. I have submitted prefiled testimony in Case No. 23-4087-PET (Granville), Case No. 24-3345-PET (Manchester), 25-0066-PET (Williamstown) and 25-0407-PET (Readsboro), among others. I have testified before Planning and Zoning Boards in Maine, New Hampshire, Rhode Island, Massachusetts, New York and New Jersey. I have also testified on more than 20 occasions before the Connecticut Siting Council, which has jurisdiction over telecommunications facilities.

Q4. Please identify the location of the Project that is the subject to this § 248a filing.

A4. Vertex Towers, LLC (“Vertex”) intends to construct a telecommunications facility on a

("Parcel") located off Route 100 in Rochester, Vermont for the initial use of Bell Atlantic Mobile Systems, LLC d/b/a Verizon Wireless ("Verizon") and subsequent use by other communications providers. Verizon refers to the project as "Rochester." The property owner has given Verizon and Vertex permission to proceed with this Application. T The coordinates for the Tower are: latitude 43°51'35.39" North and longitude 72°47'53.37" West. See Permit Plans (Exhibit SA-1; "Permit Plans") for a visual depiction of the Project's location.

Q5. From a Radio Frequency Engineer's perspective, please describe what site improvements will be necessary for the proposed Project.

A5. Vertex will create a 50' x 50' compound ("Compound") enclosed by an 12' high chain link fence, with a locked gate. Vertex will construct a 140' above ground level ("AGL") self-support lattice telecommunications tower ("Tower") within the Compound.

Verizon will place three (3) sectors of three (3) panel antennas ("Antennas") each on the Tower for a total of nine (9) Antennas. Each of the Antennas will be mounted at a centerline height of 135' AGL. Six (6) of the Antennas will measure approximately 72" long and 11.9" wide each. The remaining three (3) Antennas will measure approximately 28.9" long and 15.75" wide each. The topmost height of the Antennas will be approximately 138' AGL.

At each sector, Verizon will install two (2) Remote Radio Heads ("RRHs") per Sector for a total of six (6) RRHs. Due to their position behind the Antennas, the RHHs should not be visible to most viewers. Three (3) of the RRHs will measure approximately 14.96" long and 14.96" wide; the other three (3) will measure approximately 15" by 15." The topmost points of the RRHs will not exceed the topmost points of the Antennas.

Behind one of the sectors, Verizon will install one (1) OVP distribution box ("OVP"). The topmost point of the OVP will not exceed the topmost points of the Antennas. The OVP measures approximately 29.5" long by 16.5" wide.

Full and accurate specifications of the proposed Antennas, RRHs and OVP are detailed in Exhibit ML-1. The Prefiled Testimony of Scott Adams, P.E. discusses the location of the other equipment at the Site.

Q6. Describe Verizon's efforts to collocate the Project on an existing telecommunications facility.

A6. As part of our analysis of this Project, we searched publicly available databases (See Exhibit ML–2 Existing Tower Analysis) for existing telecommunications facilities and existing structures for possible collocation opportunities. No such facilities or structures that would allow Verizon to meet its coverage and capacity needs for the Rochester search ring were identified.

The propagation plots that I have created for this site illustrate these difficulties. (See Exhibit ML–3 Propagation Plots). The Town of Rochester is situated within a valley, bisected by Route 100. The mountain ranges on both sides of Route 100 limit the effective range of existing cell coverage, with intervening terrain causing a sharp drop off in coverage as illustrated in those plots.

The existing facilities both within the Town of Rochester (of which, there is only one, the church steeple identified as #9 on Exhibit ML-2)[1] and within a radius of ten (10) miles from the proposed site cannot provide adequate coverage to the area being served by this project. They are much too far away to provide coverage to the identified gap or Verizon is already installed on the facility. The closest facility is the Church Steeple (See #9 on Exhibit ML-2). As discussed in the pre-filed testimony of Scott Adams, the existing structure could not support another carrier, but even if it could, the coverage it would afford would not be adequate to meet the coverage goals of this project. (See Exhibit ML-4 Alternative Site Propagation Plots at Page 1). Verizon is already located on the next closest existing facilities suitable for a wireless installation (See #2, #3, #4, #6, #7 in Exhibit ML–2). Therefore, the closest existing facility that would be viable for co-location is #8 as shown

[1] While a Certificate of Public Good was issued for a telecommunications facility located at 1610 Town Line Road, Rochester (See Docket No. 8548), our review of the docket and satellite imagery indicates that the conditions of the CPG were not met, and the facility was not constructed.

on Exhibit ML-2, which is located 9.4 miles from the proposed facility. As shown on Exhibit ML-4 at Page 2, the coverage from this facility would not provide adequate coverage to the Town of Rochester, nor the Route 100 corridor, which is the purpose of this project. Accordingly, there is not viable option for Verizon to co-locate on an existing facility and meet its coverage objectives.

Q7. Please address the level of radiation associated with the proposed equipment.

A7. Under federal law, Verizon is required to comply with the radiofrequency ("RF") emission levels established by the Federal Communications Commission ("FCC"). Calculations using the most extreme assumptions, which could not possibly be duplicated at the site, demonstrate that RF emission levels for this site will still be well below the Maximum Permissible Exposure limits established by the FCC.

Q8. Does this conclude your Prefiled Direct Testimony?

A8. Yes.

Exhibits to Prefiled Testimony of Martin J. Lavin

Exhibit ML-1	Antenna, Remote Radio Head and OVP Specifications
Exhibit ML-2	Existing Tower Analysis
Exhibit ML-3	Propagation Plots
Exhibit ML-4	Alternative Site Propagation Plots