



April 3, 2023

Sally Zeh  
Director of Electricity and Gas Utilities  
Maine Public Utilities Commission  
18 State House Station  
Augusta, ME 04333-0018

**RE: Versant Power Transmission Line Rebuild or Relocation Projects, 35-A  
M.R.S.A. §3132(3) and Minor Transmission Line Construction Projects, 35-A  
M.R.S.A. §3132 (3-A).**

Dear Ms. Zeh:

Pursuant to 35-A M.R.S.A. § 3132(3); (3-A) and Chapters 330 § 8 and 308 § V of the Maine Public Utilities Commission Rules, enclosed is Versant Power's (Company) annual filing of its Transmission Line Rebuild or Relocation Projects (69 kV and above), and its Minor Transmission Line Construction Projects (69 kV and above) ("Chapter 330 Report").

Attached to this letter is a summary list of the projects by category (Attachment A); a map of the Maine Public District (MPD) service territory depicting the location of projects in that service region (Attachment B); data sheets with detail for all projects (Attachment C); a copy of the Company's most recent depreciation study for each service region that includes the useful lives of the poles and conductors that constitute Versant Power's existing transmission system (Attachment D).

**Bangor Hydro District**

Versant Power intends to carry out one Chapter 330 transmission line rebuild project in the Bangor Hydro District (BHD) in the next five years. The Company does not intend to carry out any new transmission line construction projects in the BHD in the next five years.

**Maine Public District**

Versant Power intends to carry out four Chapter 330 transmission line rebuild or relocation projects in the MPD in the next five years. The Company does not intend to carry out any new transmission line construction projects in the MPD in the next five years.

After working with and receiving feedback from regional stakeholders (such as the Aroostook Energy Association), many of these projects are smaller phased-based projects. Versant Power has determined that targeted rebuilds of specific line sections conducted over longer time periods, rather than larger complete front-to-back line rebuilds, is a preferred line rebuild method to implement best practice designs.

All rebuild projects listed in this Chapter 330 Report are required to address transmission line condition (*i.e.*, end-of-life, deterioration, weather damage) issues only. There are no reasonable alternatives to these projects.

### **Transmission Line Rebuild or Relocation Projects (69 kV and above)**

See Title 35-A M.R.S.A. § 3132(3) <sup>1</sup>

In the next five years, Versant Power currently has four projects it intends to carry out under this category in the MPD and it has one project it intends to carry out in the BHD. A brief description of each project listed in numerical order follows:

#### **1. Line 6904 Rebuild (Structure 11 to 34)**

Description: This MPD project will rebuild the lower 3.5-mile section or about one-third of Line 6904 that connects Tinker Hydro with the Company's Limestone Switching Station. This line was constructed in 1964 using primarily two pole H-Frame structures with wood pole crossarms and porcelain suspension insulators. This line does not have lightning protection. Recent inspections of the entire 9.2-mile length of Line 6904 identified 14 structures, six crossarms, and nine suspension insulators in poor condition requiring replacement. Additionally, several structures showed signs of lightning damage, and a plan and profile analysis identified several spans with vertical conductor to ground clearance violations due to their long (atypical) span lengths of greater than 800 feet. The Company had originally planned to address all these issues through targeted maintenance work; however, crossing Limestone Stream to reach at-risk assets and address clearance issues in this lower and more isolated segment of line 6904 is extremely challenging. Versant Power concluded that it will be most efficient and effective to complete this work in its entirety, as more assets become at risk and require replacement down the road. Therefore, the Company will address all asset condition and clearance issues north of structure 34 through targeted maintenance, but rebuild the lower 3.5-mile section of Line 6904 from structures 11 to 34 in 2023 crossing over Limestone Stream only once and not multiple times going forward. This project is currently under construction.

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<sup>1</sup> Title 35-A M.R.S.A. § 3132(3) requires each transmission and distribution utility to file an annual report of the "transmission line rebuilding or relocation projects that it intends to carry out during the next five years...that will become, or remain at, 69 kilovolts or more."

## **2. Line 63 Rebuild**

Description: This BHD project will rebuild a short 0.38 mile long four structure 115kV transmission line that connects the Company's Keene Road 115kV Substation to its Chester 115kV Substation. This line was originally built in 1963 and this project is needed to address aging plant in deteriorating condition as numerous poles have internal and external decay at ground line level and others have decaying tops. Additionally, three poles have large woodpecker holes that provide access to internal nesting cavities, reducing pole strength at these locations and several other poles have one or more smaller woodpecker holes. This project would replace all wood pole structures with taller single steel or composite non-wood poles, eliminate the need for large horizontal crossarms through the application of either horizontal polymer line post insulators or davit arms with polymer suspension insulators with overhead lightning protection. Since the construction of this line, an abutting property owner has built a garage with second floor close to the edge of the ROW corridor. Changing from horizontal flat to vertical construction will improve the blowout clearance distance of the conductor closet to this structure. This proposed project is currently planned for 2024.

## **3. Line 6950 Rebuild (Westfield to Mars Hill Switching Station)**

Description: Line 6950 is in the MPD. It runs alongside, and operates in parallel with, Line 6940. Together, these lines provide a strong and reliable 69kV backbone transmission power flow source for more than 5,000 MPD customers and the thousands more served indirectly by Eastern Maine Electric Cooperative (EMEC). This project will rebuild the Line 6950 segment from the Company's Westfield Substation to its Mars Hill Switching Station. This line segment is 3.4 miles long and comprised of 30 primarily H-frame wood pole structures with wood pole crossarms, porcelain suspension insulators, and 336.4 ACSR wire. This line segment was originally constructed in 1964. According to recent comprehensive ground line wood pole strength and condition assessment performed in 2019, more than 50% of all original wood poles had some level of internal decay, 25% had reduced shell strength due to internal rot, and 20% had shell rot. This level of internal and external decay is expected to increase as these wood poles continue to age and will be reassessed in 2023 along with an up-close overhead visual (drone) assessment of this line segment. This project is currently planned for 2025.

## **4. Line 6905 Rebuild Phase 1 (Structure 50 to 80)**

Description: Line 6905 is in the MPD. This Phase 1 project will begin the rebuild of Line 6905 ROW segments by addressing a four-mile length near the Company's Limestone Switching Station. According to the most recent comprehensive ground line wood pole strength and condition assessment performed in 2018 on its southern ROW section of this line, 84% of wood poles had some level of internal decay requiring remediation treatment, 13% of these poles had reduced shell strength, and seven were rejected because their remaining strength had dropped below 66% of its original level. This level and severity of

decay is expected to increase as these aging wood poles placed in service in 1964 continue to age and these wood poles will be reassessed in 2023 along with an up-close overhead visual (drone) assessment of this line's entire ROW segments planned for 2024. This project is planned for 2026 but the final scope and timing of this conceptual project will depend on the results of various ground-based inspections and the comprehensive UAS (drone) visual assessment of this transmission line's ROW segments to be performed over the next couple of years.

#### **5. Line 6905 Rebuild Phase 2 (Structure 81 to 110)**

Description: This Line 6905 Phase 2 rebuild project will address another four miles of the oldest section of this 69kV transmission line. According to the most recent comprehensive ground line wood pole strength and condition assessment performed in 2018 on the southern ROW section of this line, 84% of wood poles had some level of internal decay requiring remediation treatment, 13% of these poles had reduced shell strength, and seven were rejected because their remaining strength had dropped below 66% of its original level. This level and severity of decay is expected to increase as these aging wood poles placed in service in 1964 continue to age and these wood poles will be reassessed in 2023 along with an up-close overhead visual (drone) assessment of this line's entire ROW segments planned for 2024. This project is planned for 2027 but the final scope and timing of this conceptual project will depend on the results of various ground-based inspections and the comprehensive Unmanned Aerial System (drone) visual assessment of this transmission line's ROW segments to be performed over the next couple of years.

#### **Minor Transmission Line Construction Projects (69 kV and above)**

See Title 35-A M.R.S.A. § 3132(3-A)<sup>2</sup>

Versant Power does not currently intend to carry out any new minor transmission line construction projects in the next five years.

#### **Notable 2023 Chapter Report Inclusions & Removals**

There was one notable project inclusion and one removal in the Company's 2023 Chapter 330 Report. A project to rebuild Line 63 that connects the Company's Keene Road 115kV Substation to its Chester 115kV Substation was added for year 2024. This project is needed to address wood poles with internal and external decay, but more notably to address three wood pole structures that have large woodpecker nests that cannot be adequately patched for the purpose of restoring pole strength to their original levels.

Following an Unmanned Aerial System (drone) visual assessment of the Line 69032 (Loring Tap)

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<sup>2</sup> Title 35-A M.R.S.A. § 3132(3-A), requires transmission and distribution utilities to separately report minor transmission line construction projects. A minor transmission line construction project is defined as "...a transmission line construction project, the cost of which does not exceed 25% of the utility's current annual transmission property depreciation charge." For year 2022, 25% of Versant Power's annual transmission property depreciation charge is \$4,058,275.

performed in the summer of 2022, Versant Power decided that a complete rebuild of this line was not needed at this time, so it was removed from this report and targeted maintenance work will be performed this year instead.

We look forward to meeting with you in April to review these projects in greater detail. In the meantime, please contact Dave Norman at (207) 973-2708, Kyle Ravin (207) 973-2707, or me at (207) 973-2819 if you have any questions about this filing.

Sincerely,

/s/ Arielle Silver Karsh

Arielle Silver Karsh

Vice President, Legal and Regulatory Affairs

Enclosures

## **Attachment A**

### **Project Progress Update from 2022 Filing**

Line 6930 Rebuild (Dow Siding to Maysville Siding)

(Completed, In-service)

Line 69201 Rebuild (ROW to Roadside)

(Completed, In-service)

### **Transmission Line Rebuild or Relocation Projects (69 kV and above)**

Line 6904 Rebuild (Structures 11 to 34)

(Under Construction)

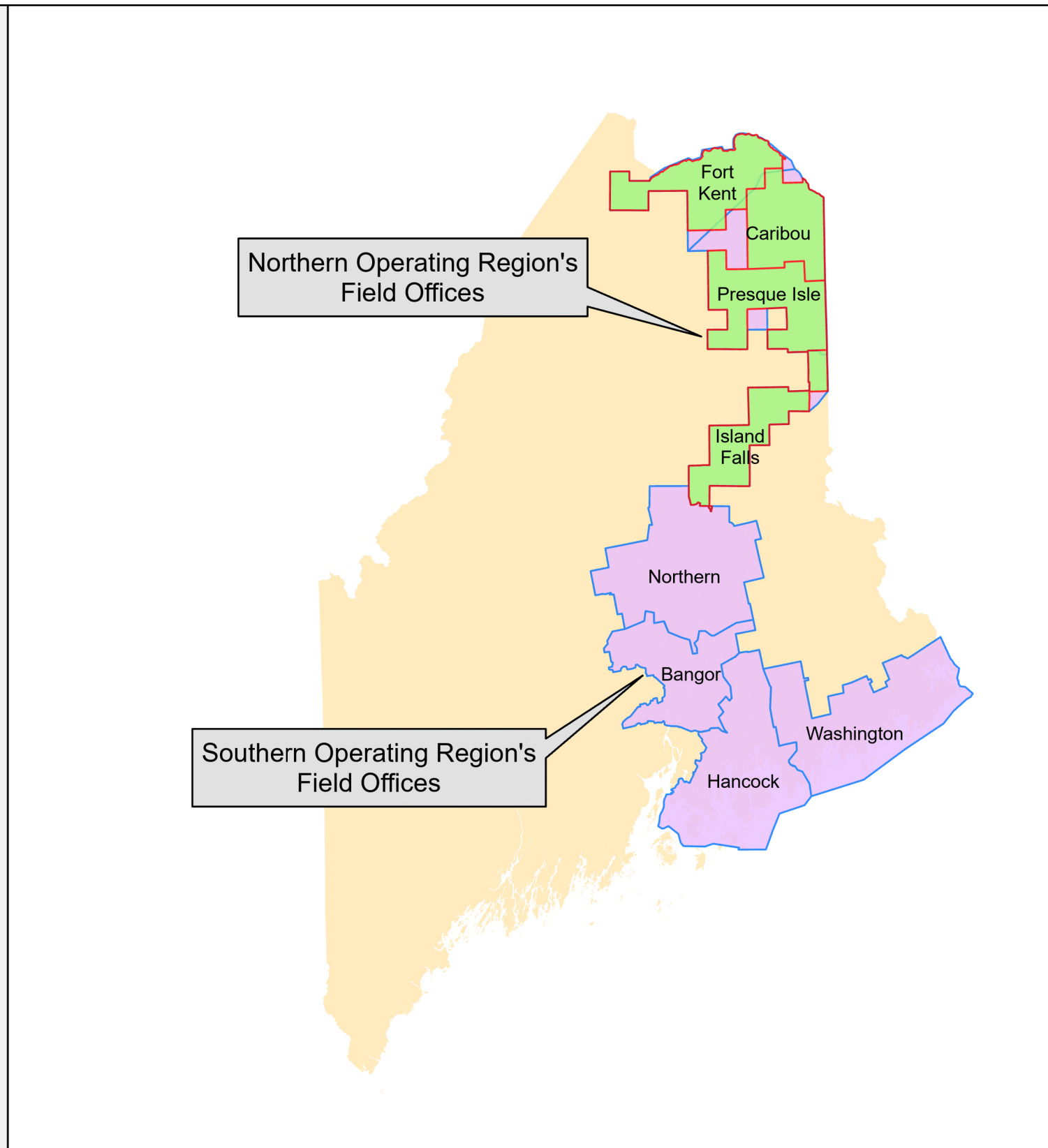
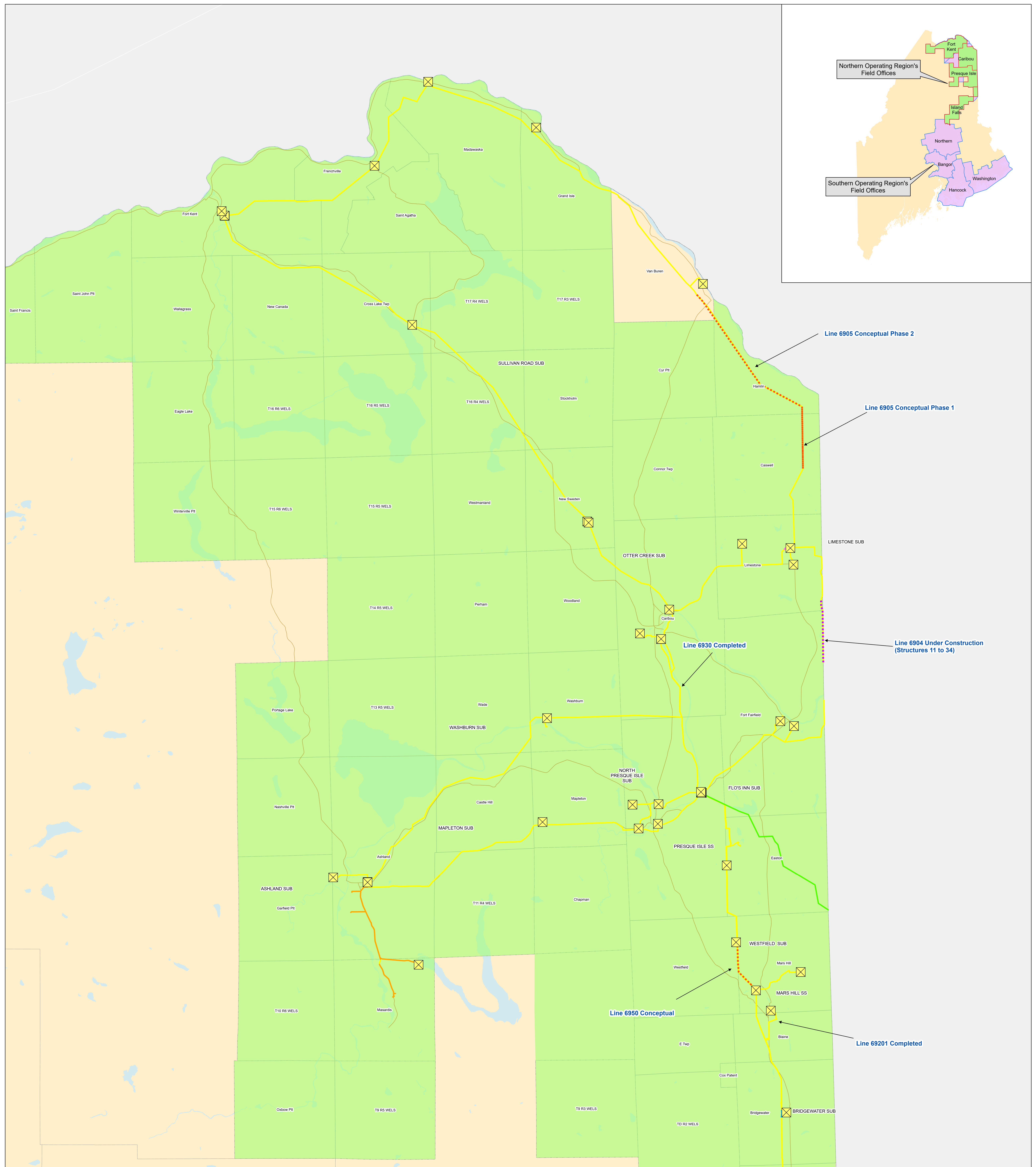
Line 63 Rebuild

Line 6905 Rebuild Phase 1 (Structures 50 to 80)

Line 6905 Rebuild Phase 2 (Structures 81 to 110)

Line 6950 Rebuild (Westfield to Mars Hill Switching Station)

### **Minor Transmission Line Construction Projects (69kV and above)**



<p>Chapter 330 Project Area Status</p> <ul style="list-style-type: none"> <li><span style="color: blue;">.....</span> In Service</li> <li><span style="color: purple;">.....</span> Under Construction</li> <li><span style="color: green;">.....</span> Planned</li> <li><span style="color: pink;">.....</span> Proposed</li> <li><span style="color: orange;">.....</span> Conceptual</li> </ul>	<p>Substations</p> <p>Existing Transmission Lines</p> <ul style="list-style-type: none"> <li><span style="color: blue;">—</span> 19.9 KV</li> <li><span style="color: orange;">—</span> 34.5 KV</li> <li><span style="color: green;">—</span> 44/46 KV</li> </ul>	<ul style="list-style-type: none"> <li><span style="color: yellow;">—</span> 69 KV</li> <li><span style="color: green;">—</span> 115/138 KV</li> <li><span style="color: magenta;">—</span> 345 KV</li> </ul>	<ul style="list-style-type: none"> <li><span style="background-color: #e6e6fa;">■</span> Southern Operating Region</li> <li><span style="background-color: #c1e1c1;">■</span> Northern Operating Region</li> </ul>	<p>DATA SOURCES: MAINE OFFICE OF GIS, ESRI, AND VERSANT POWER</p> <p>PROJECTION: NAD 1983 UTM ZONE 19N</p> <div style="text-align: center;"> </div>
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**VERSANT POWER**

**NORTHERN OPERATING REGION AND TRANSMISSION SYSTEMS**

**PROJECTS IN CHAPTER 330 FILING**

DATE: MARCH 2022