



April 1, 2022

Faith Huntington
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. Huntington:

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 ("Versant Power" or "the 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 service territory depicting the location of all projects (Attachment B); data sheets with detail for all projects (Attachment C); and a copy of the Company's most recent depreciation study 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 does not intend to carry out any major or minor Chapter 330 transmission line rebuild, relocation, or new construction projects in the Bangor Hydro District ("BHD") in the next five years.

Maine Public District

Versant Power intends to carry out seven Chapter 330 transmission line rebuild or relocation projects in the Maine Public District ("MPD") in the next five years. Versant Power 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 and 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, are the preferred line rebuilding 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) 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) ¹

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

1. Line 6904 Rebuild (Structure 11 to 34)

Description: This 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 and needing to be replaced. 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 but the need to cross Limestone Stream to reach at-risk assets and address clearance issues in this lower and more isolated segment of line was determined to be extremely challenging and something that the Company decided to complete once and not multiple times going forward, as more assets become at-risk and require replacement down the road. As a result, the Company chose to address all asset condition and clearance issues north of structure 34 through targeted maintenance, but to 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.

2. Line 6905 Rebuild Phase 1 (Structure 50 to 80)

Description: 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 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. 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 a comprehensive UAS (drone) visual assessment of this entire transmission line to be conducted over the next few years.

¹ 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."

3. Line 6915 Construction (Flo's Inn to North Presque Isle Substation)

Description: This project will rebuild the 2.5-mile-long ROW segment of Line 6915 from the Company's Flo's Inn Substation to the Aroostook River improving the overall reliability of this line by removing from service wood poles and wood pole crossarms in deteriorated condition and other wood poles damaged by farm machinery. Because the design temperature of the 336.4 ACSR wire is 120 degrees F, this transmission line is severely sag-limited during the summer months. This project will address this short coming by substituting 795 ACSR wire for the 336.4 ACSR in use today. This project is planned for construction in 2024 but the final scope and timing of this conceptual project will depend on follow-up, ground-based inspection results and a comprehensive UAS (drone) visual overhead assessment of this entire transmission line segment planned for this year.

4. Line 6930 Rebuild (Dow Siding Road to Maysville Siding Road)

Description: Line 6930 is a 69kV transmission line that connects the Company's Caribou to Ashland Substations. Construction of this transmission line segment rebuild project began in 2021 and targeted a three-mile segment of Line 6930 located between the Dow Siding and Maysville Siding Roads through the removal from service of wood poles treated with creosote preservative that were placed in-service in 1954 and with a high rate of internal decay. This project was suspended during the latter half of 2021 because the Company decided that having both Lines 6930 and 1176 out-of-service for construction at the same time presented a risk to reliability, so the remainder of this project work (placement of six poles and a mile of OPGW overhead static wire for lightning protection) is planned for completion in May 2022.

5. Line 6950 Rebuild (Westfield to Mars Hill Switching Station)

Description: Line 6950 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") and Houlton Water Company ("HWC"), the latter in a back-up capacity. 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, a year prior to its proposed rebuild, and will be monitored by follow-up ground-based and overhead visual (drone) assessments. This project is planned for 2025.

6. Line 69201 Rebuild (Mars Hill Tap ROW)

Description: Line 69201 is comprised of a 1.0-mile-long segment located alongside US Route 1 and a 1.3-mile long section located in a sometimes narrow and sometimes swampy utility-maintained right-of-way ("ROW"). According to the most recent comprehensive ground line wood pole strength and condition assessment and foot based visual patrols, six of the 24 wood poles located in the ROW were determined to have insufficient shell thickness/strength and more than 33% of the original wood poles in ROW were determined to have some level of internal decay. Images

gathered during a UAS (drone) visual assessment in 2021 found some wood sawn crossarms with various degrees of rot on their top surfaces, wood poles with rotting and split tops, and a few tipped insulators. In addition to these strength and condition issues, four wood poles are in an expansive swamp for which access for maintenance purposes is extremely difficult and expensive.

This proposed project will rebuild the 1.3-mile section of Line 69201 moving it out of its narrow and (in places) wet ROW to alongside US Route 1/Main Street in Mars Hill where it will combine with the Company's existing distribution circuit and communication utilities located across the road resulting in one pole plant, which is safer for motorists. This new line segment, which has received the go-ahead from the Maine Department of Transportation (MDOT) is 1-mile long resulting in a 0.3-mile reduction in overall Line 69201 line length.

This new roadside line segment will be built using taller and heavier class wood poles and will replace the 1/0 Copperweld conductor with 3/0 ACSR wire. This project will also remove from service numerous brown glass post type insulators that have a high incidence of failure in the Company's Maine Public District Service Region.

7. Line 69032 Rebuild Loring Tap

Description: This project will rebuild the 1.6-mile long Line 6903 tap to the Company's Loring Substation and the Loring Commerce Center (a potential industrial expansion site). This project is needed to remove from service aging transmission assets (poles and crossarms) in poor condition and approaching end-of-life. This rebuild project will place in-service taller and heavier class wood poles with fiberglass horizontal crossarms and polymer post type clamp insulators. The existing conductor will be retained for now but because of the taller and heavier class poles a larger gauge wire could be easily installed in the future should load growth or generation materialize at the Loring Commerce industrial site. This project is planned for 2023, but before that a full-scale strength and condition assessment of in-service wood poles comprising this Line 6903 tap and a planned visual assessment using UAS (drone) technology are scheduled for year 2022. The final scope of this project will be better known upon the conclusion of this inspection work and review of the data gathered.

Minor Transmission Line Construction Projects (69 kV and above)

See Title 35-A M.R.S.A. § 3132(3-A)²

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

Notable 2022 Chapter Report Inclusions & Removals

² 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 2021, 25% of Versant Power's annual transmission property depreciation charge is \$3,966,182.

There was one notable project inclusion and one removal in the Company's 2022 Chapter 330 Report. The project added will rebuild the Line 6904 segment from structure 11 (US Border) to structure 34 and is needed for the reasons summarized in its project page write-up. Following a UAS (drone) visual assessment performed in the spring of 2021 it was decided that the rebuild of Line 69053 (Van Buren Tap) was removed from this report and that targeted maintenance work will be performed instead. The Company would also like to point out that while it had expected to complete the 3-mile rebuild of the Line 6930 segment from Dow Siding to Maysville Siding Roads in 2021, the timing of Line 6930 and Line 1176 Rebuild work would have required that both lines be out-of-service at the same time. The Company decided that this system configuration presented a risk to reliability, so Line 1176 work proceeded, and Line 6930 work was suspended with the remaining work moved to 2022. As a result, this project is listed in this year's report as "under construction" in Attachment A and is scheduled for completion in May.

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, Steve Sloan at (207) 973-2568, 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

Director, Legal and Regulatory Affairs

Enclosures:

1. Attachment A – Summary List of Projects
2. Attachment B – 2022 Chap 330 Transmission Project Map
3. Attachment C – Chapter 330 Project Page
4. Attachment D – BHE and MPS Depreciation Study

Attachment A

Project Progress Update from 2021 Filing

Line 1176 Rebuild Phase 2

(Completed, In-service)

Line 1176 Rebuild Phase 3

(Completed, In-service)

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

Line 6903 Loring Tap Rebuild

Line 6904 Rebuild (Structures 11 to 34)

Line 6905 Rebuild Phase 1 (Structures 50 to 80)

Line 6915 Rebuild (Flo's Inn to North Presque Isle Substation)

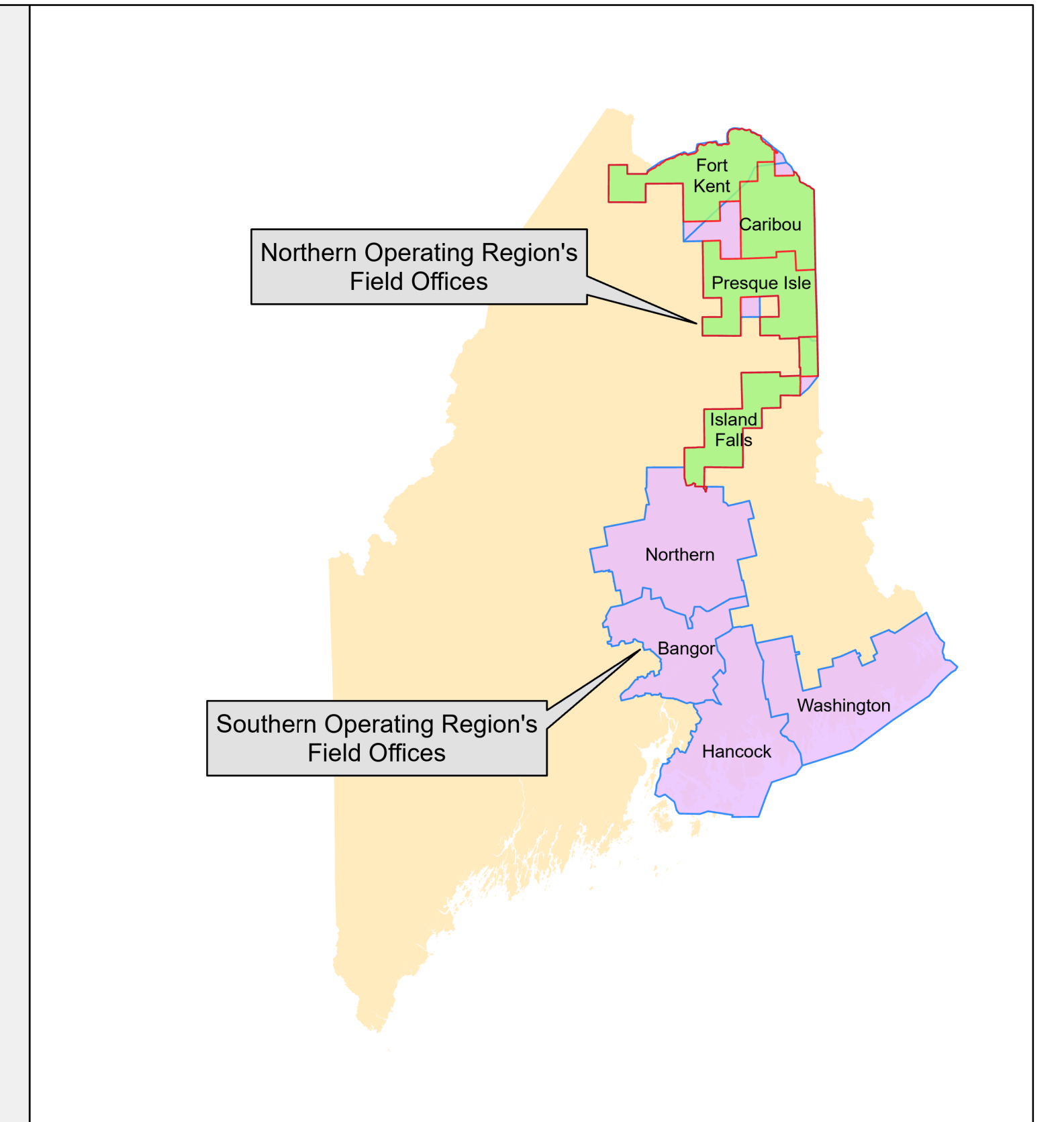
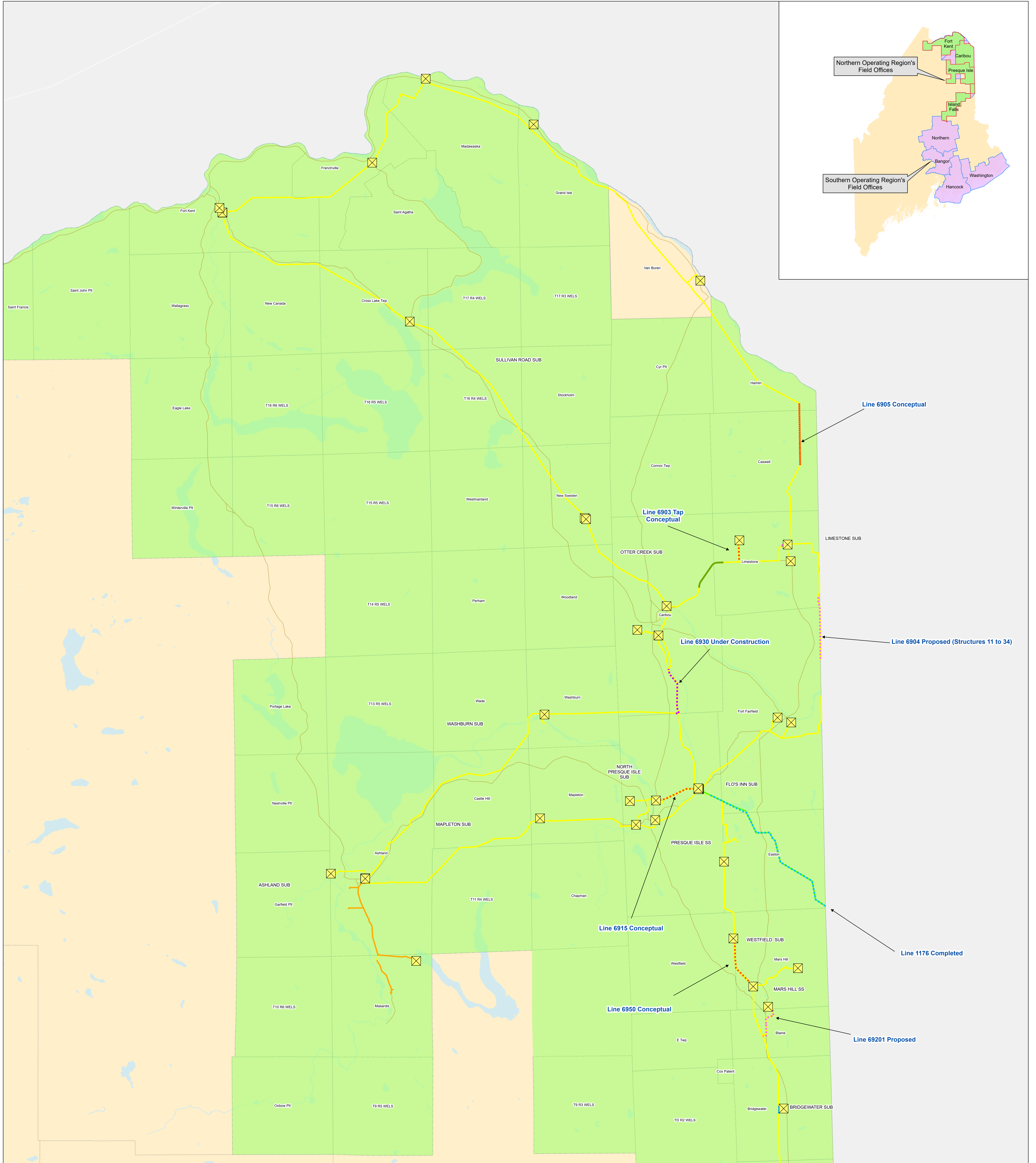
Line 69201 Rebuild (Mars Hill Tap ROW to Road)

Line 6930 Rebuild (Dow Siding Road to Maysville Siding Road)

(Under Construction)

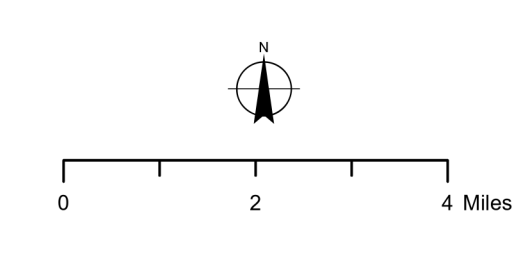
Line 6950 Rebuild (Westfield to Mars Hill Switching Station)

Minor Transmission Line Construction Projects (69kV and above)



Chapter 330 Project Area Status		Substations		Voltage		Region	
.....	In Service	⊠	Substations	—	69 KV	⬜	Southern Operating Region
.....	Under Construction	—	Existing Transmission Lines	—	115/138 KV	⬜	Northern Operating Region
.....	Planned	—	19.9 KV	—	345 KV		
.....	Proposed	—	34.5 KV				
.....	Conceptual	—	44/46 KV				

DATA SOURCES: MAINE OFFICE OF GIS, ESRI, AND VERSANT POWER
 PROJECTION: NAD 1983 UTM ZONE 19N



VERSANT POWER
 NORTHERN OPERATING REGION
 AND TRANSMISSION SYSTEMS
 PROJECTS IN CHAPTER 330 FILING



DATE: MARCH 2022