

**MonDower®**

**PotomacEdison™**  
*A FirstEnergy Company*

**Broadband Feasibility Study**

**Voluntary Submittal as per Senate Bill 3 to  
the**

**West Virginia Broadband Enhancement Council**

**June 4, 2020**

**Broadband Feasibility Study**  
**Submitted to the West Virginia Broadband Enhancement Council**  
**By Monongahela Power Company and The Potomac Edison Company**

COME NOW Monongahela Power (“Mon Power”) and The Potomac Edison Company (“PE,” and together with Mon Power, the “Companies”) hereby submit this Broadband Feasibility Study (“Study”) to the West Virginia Broadband Enhancement Council (“Council”) pursuant to W. Va. Code § 31G-4-5 (b).

**Introduction and Basis for Report**

Mon Power and PE are wholly owned subsidiaries of FirstEnergy Corp. (“FirstEnergy”), a diversified energy holding company. The Companies do business as electric public utilities in the State of West Virginia and provide generation, transmission and distribution services to approximately 535,000 customers in all or portions of 40 counties in northern West Virginia.

The state identified broadband technology as an opportunity to connect communities and promote economic development in the state. The Council committed to goals to bring a better quality of life to underserved and unserved communities throughout the state.<sup>1</sup>

In March of 2019, the West Virginia Legislature enacted Senate Bill 3 (“The West Virginia Small Wireless Facilities Deployment Act” or “Act”), which established a voluntary program whereby each electric utility may investigate the feasibility<sup>2</sup> of constructing and operating a middle-mile broadband communication project within the electric utility distribution system.

Specifically, the Study should address eight (8) requirements. Those requirements and a brief summary of the answers are shown below:

1. The scope of the proposed project for which the feasibility study is conducted, which shall include but not be limited to:

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<sup>1</sup> <https://broadband.wv.gov/>

<sup>2</sup> **§31G-4-5(b)** Each electric utility may investigate the feasibility of constructing and operating a project within the electric utility distribution system and, if it so elects, may submit a feasibility study of a proposed project to the council on or before December 1, 2019. Additional feasibility studies may be submitted to the council after December 1, 2019, without penalty.

- (A) The route of the middle-mile infrastructure proposed for the project (page 10; Appendix A); the number of fiber strands that would be utilized in connection with the proposed project and dedicated to serve as the middle-mile (pages 10-11); the location of the electric utility's distribution infrastructure that will be utilized in connection with the proposed project (page 12); the capacity of the middle-mile broadband infrastructure that will be available to lease to last-mile broadband Internet providers upon completion of the proposed project (pages 10-11);
  - (B) The estimated cost of the proposed project, including, but not limited to, engineering costs, construction costs, permitting costs, materials and labor, right-of-way costs, and a reasonable rate of return to the electric utility (pages 13-15);
  - (C) The proposed schedule of construction of the proposed project (page 14); and
  - (D) The method of attachment and connection of the middle-mile broadband fiber assets to the electric utility's distribution infrastructure (page 11);
2. The regulatory and legal barriers to an electric utility's constructing a project and operating middle-mile broadband infrastructure to provide access to unserved areas of the state, as defined in §31G-1-2 of this code, and any underserved areas of the state, and proposed legislation to address such regulatory barriers (pages 15-19);
  3. Whether it is in the public interest and the interest of the electric utility to make improvements to the distribution grid in furtherance of providing such middle-mile broadband internet services in conjunction with its program of electric distribution projects (pages 5-7);
  4. Whether it is in the public interest and the interest of the electric utility to operate middle-mile broadband Internet assets to provide access to unserved and underserved areas of the state (pages 5-7);
  5. Whether it is in the public interest and the interest of the electric utility to permit a third-party to lease such capacity to provide last-mile broadband Internet services to unserved and underserved areas of the state (page 7);
  6. Whether construction of middle-mile broadband Internet infrastructure utilizing electric utility distribution systems is feasible with respect to the maturity of the relevant technology, the compatibility of such services with existing electric services, and the financial requirements to undertake such project (page 7);
  7. The anticipated level of rate adjustment necessary to allow the electric utility to recover its costs associated with the proposed project, and a reasonable rate of return, on an expedited basis, that will be recovered by the electric utility through a rate adjustment at the commission (page 14);
  8. Such other information that is pertinent to the project.

## Drivers for Extending Broadband Access

The need for broadband access for all Americans has been identified as a strategic priority at the national level. As part of the Federal Communications Commission (“FCC”) Strategic Plan for 2018-2022, the priority is to close the digital divide. “High-speed Internet access, or broadband, is critical to economic opportunity. But there are too many parts of the country where broadband is unavailable or unaffordable.”<sup>3</sup>

At the state level, the Council has identified the three most significant benefits of access to broadband for West Virginia residents, which are in line with the federal objectives:

- ❖ **Economic Development** – “Broadband provides access to regional, national and worldwide markets, enhancing the opportunities for current businesses, while providing the infrastructure to create new businesses and technology-based companies in areas of West Virginia that have traditionally lacked such business and employment opportunities.”<sup>4</sup>
- ❖ **Education** – “All levels of West Virginia’s educational system will benefit. High speed connectivity offers the promise of remote class instruction, shared course offerings and a much greater range of media materials available online. Broadband can overcome geographical and financial barriers to provide a wide range of educational and cultural opportunities.”<sup>5</sup>
- ❖ **Healthcare** – “Telemedicine has the potential to revolutionize health care in rural America by allowing instant retrieval of health records, video interface, improved emergency response and the possibility of ‘e-visits’ that connect health professionals

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<sup>3</sup> Federal Communications Commission Strategic Plan 2018-2022 <https://docs.fcc.gov/public/attachments/DOC-349143A1.pdf>

<sup>4</sup> <https://broadband.wv.gov/resources/broadband-in-wv/>

<sup>5</sup> *ibid*

and specialists to patients in real time – at home – facilitating the highest quality of medical care to rural populations.”<sup>6</sup>

The Council has identified areas where an opportunity to meet the needs of the underserved/unserved customers exists. This map is provided in Figure 1 below.

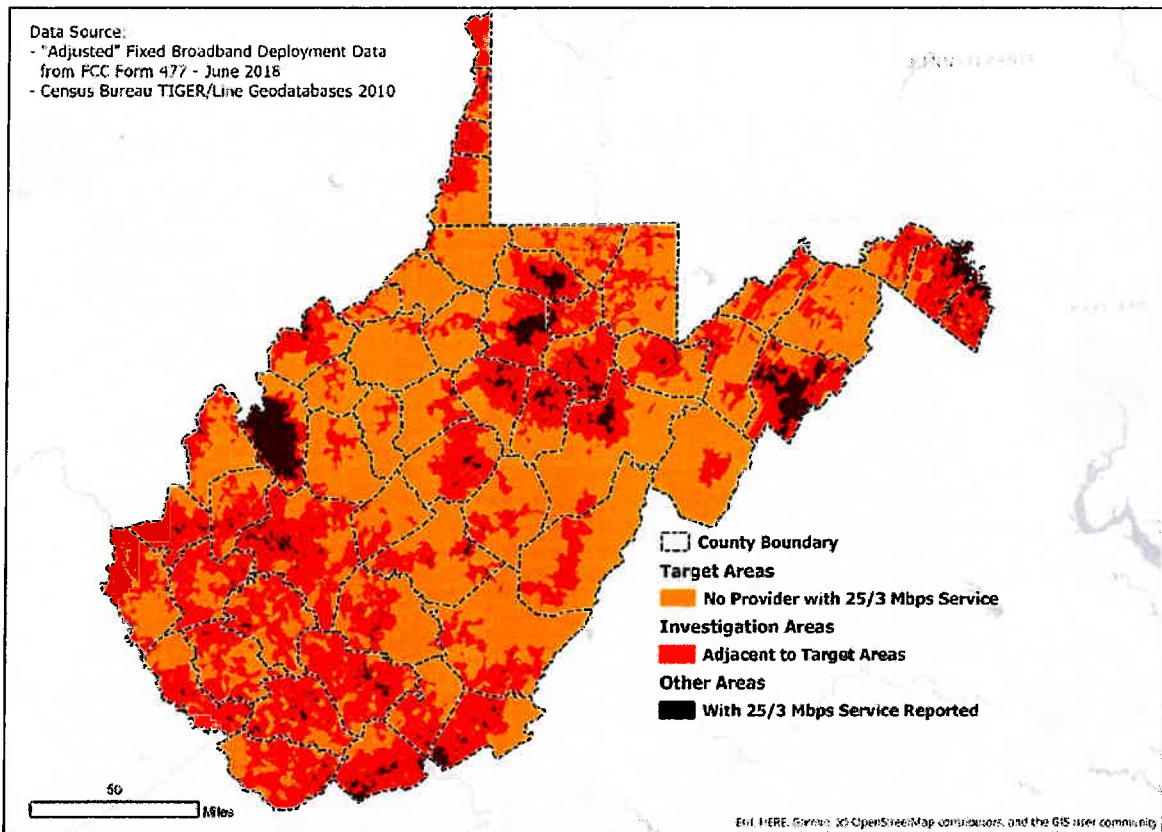


Fig 1.0 Underserved areas within West Virginia

## Aspects of Broadband Development

According to the FCC, “broadband” is defined as 25 megabits per second (“Mbps”) download and 3 Mbps upload (“25/3 Mbps Service”).<sup>7</sup> Per the West Virginia Legislature, “Broadband” or “broadband service” means any service providing advanced telecommunications capability with

<sup>6</sup> *ibid*

<sup>7</sup> This is consistent with Section 4.1 of the Council’s Request For Information <http://broadband.wv.gov/wp-content/uploads/2019/10/WV-Broadband-Council-RFI-2019.pdf>

the same downstream data rate and upstream data rate as is specified by the Federal Communications Commission and that does not require the end-user to dial up a connection, that has the capacity to always be on, and for which the transmission speeds are based on regular available bandwidth rates, not sporadic or burstable rates, with latency suitable for real-time applications and services such as voice-over Internet protocol and video conferencing, and with monthly usage capacity reasonably comparable to that of residential terrestrial fixed broadband offerings in urban areas: Provided, that as the Federal Communications Commission updates the downstream data rate, and the upstream data rate, the council will publish the revised data rates in the State Register within sixty days of the federal update.” W. Va. Code § 31G-1-2 (1).

Key aspects of the broadband network considered in this Study are the “middle mile” and the “last mile.” The middle mile refers to the infrastructure connecting the last-mile service network to a provider’s backbone network that ultimately provides access to the global Internet. The last mile involves the infrastructure connections and services provided to the end user. In general, the middle mile primarily consists of fiber optic cable and associated infrastructure, while the last mile is comprised of a variety of wired and wireless options designed to meet the characteristics of end users, topographic features, and other service territory-specific variables.

### **Feasibility Study Evaluation**

As part of the Study, the Companies are asked to evaluate “whether it is in the public interest and the interest of the electric utility to make improvements to the distribution grid in furtherance of providing such middle-mile broadband Internet services in conjunction with its program of electric distribution projects” and “whether it is in the public interest and the interest of the electric utility to operate middle-mile broadband Internet assets to provide access to unserved and underserved areas of the state”. The Companies believe there are multiple benefits to West Virginia customers in leveraging utility infrastructure to construct and operate middle-mile

broadband infrastructure. Utilities have a unique opportunity to play a key role in enabling emerging technologies to further support deployment and adoption of connecting communities.

The Companies already have fiber optic networks across portions of their grids to support internal operations such as metering, supervisory control and data acquisition (“SCADA”), protective relaying, security, and other internal communication needs. Aside from the benefits of connecting customers to Internet services, there are opportunities to strengthen reliability of their electric service through:

- ❖ **Legacy circuit replacements** – Where the Companies already have leased communications to a substation, the new fiber presents an opportunity to replace unreliable copper circuits that are being phased out by telecommunications carriers.
- ❖ **New substation communications** – There are many substations in West Virginia that do not have any communications at all. The new fiber is an opportunity to provide high-bandwidth, high-reliability communications to those locations – which enables remote switching and reduces outage times by eliminating the need to dispatch crews for manual operations.
- ❖ **Upgraded Service Center communications** – Fiber provides high bandwidth and high reliability for communications at the Companies’ facilities.
- ❖ **Future Distribution Automation** – The new fiber presents an opportunity for future distribution system improvements such as automation.

Coordination of the middle-mile buildout with existing transmission and distribution initiatives will result in a lower cost of service to customers as compared to a third-party telecommunications company attaching new infrastructure that does not coincide with the utility needs. As an electric utility, fiber optic assets that are used for utility purposes are installed in the power space, which is common practice across North America. Third-party telecommunications companies must attach their commercial-use fiber assets in the communications space on the

utility's poles, which frequently requires pole replacements and other make ready work that becomes necessary due to congestion in the communications space. To maintain cost efficient use of utility assets, it is important that utility fiber – even if some strands are dedicated to rural broadband service – continue to be installed in the power space.

The Companies have also been asked to evaluate “whether it is in the public interest and the interest of the electric utility to permit a third-party to lease such capacity to provide last-mile broadband Internet services to unserved and underserved areas of the state”. While leveraging electric utility infrastructure provides a low-cost solution to build out the fiber infrastructure for both broadband and utility projects, additional involvement in the telecommunication industry is outside of the core competencies of the Companies and would not be in the best interest of the customer. By allowing a third-party to lease the capacity to last-mile broadband services, the customer will receive service and options available.

### **Feasibility of Proposed Broadband Study**

Construction of middle-mile broadband Internet infrastructure utilizing electric utility distribution systems is feasible. Given the number of strands available in modern fiber cable (e.g. 48, 96, 128, 256), providing spare "dark fibers" for third party broadband providers is compatible with providing fibers in the same cable required for operational electric utility communications. The technical feasibility of such an endeavor is not a barrier. Legal and regulatory considerations, resource constraints, and cost recovery are key challenges to undertake such a project. Legal and regulatory considerations are a factor, since operating telecommunications services is not the core business of an electric utility. Resource constraints are important, since a significant amount of fiber construction is taking place across the country – as well as in FirstEnergy's service territory – and experienced resources are in high demand. Full and timely cost recovery (including a reasonable rate of return) is also necessary, Ensuring the full and timely recovery of program costs is important for multiple reasons, including providing transparency of the costs, recognizing



the customer rate impact of the services being delivered, and facilitating the utility's ability to offer such programs.

This Study focuses on providing a middle-mile fiber infrastructure solution through three separate projects that together, if fully implemented, would result in new middle mile fiber throughout 10 counties -- Roane, Calhoun, Gilmer, Braxton, Clay, Nicholas, Webster, Randolph, Barbour and Pocahontas Counties, all of which fall within the Mon Power service territory<sup>8</sup>. The Counties were selected, in part, based upon the requirements of the Council's request for information ("RFI") document. The RFI directs specific attention to target areas requiring the "greatest assistance" to unserved areas in West Virginia. The target area is defined as "any area without access to fixed, terrestrial broadband services with a download speed of at least 25 Mbps and an upload speed of at least 3 Mbps at rates comparable to those paid by mass-market (residential and small business) consumers in the more urbanized areas of West Virginia"<sup>9</sup>. The key concepts for the scope of work outlined below are scalable and will be suitable to further formal engineering efforts related to the overall Council initiative.

As outlined in the Council's RFI document, the below map in Figure 2.0 illustrates the underserved areas that have been identified in West Virginia. A significant amount of the selected counties have no provider with 25/3 Mbps Service. This proposed middle mile solution will support broadband services to these areas within the Companies' service footprint. The counties were chosen also due to utility owned pole locations and proximity to local ISP planned routes predominately in north-central West Virginia. Consequently, the proposed design is able to achieve diverse middle mile paths to maintain continuity in the event of a fiber break, which has

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<sup>8</sup> Electric customers served in the Counties are as follows: Barbour-6,398, Braxton-8,050, Calhoun-4,521, Clay-1,933, Gilmer-4,115, Nicholas-11,809, Pocahontas-9,860, Randolph-16,621, Roane-6,430, and Webster-13,741.

<sup>9</sup> Council's RFI Section 4.1 <http://broadband.wv.gov/wp-content/uploads/2019/10/WV-Broadband-Council-RFI-2019.pdf>

a high probability during storms in West Virginia. These counties also have relatively small populations, with unserved or underserved Internet service. Therefore, opportunities exist to serve homes, businesses, hospitals, and schools in the area.

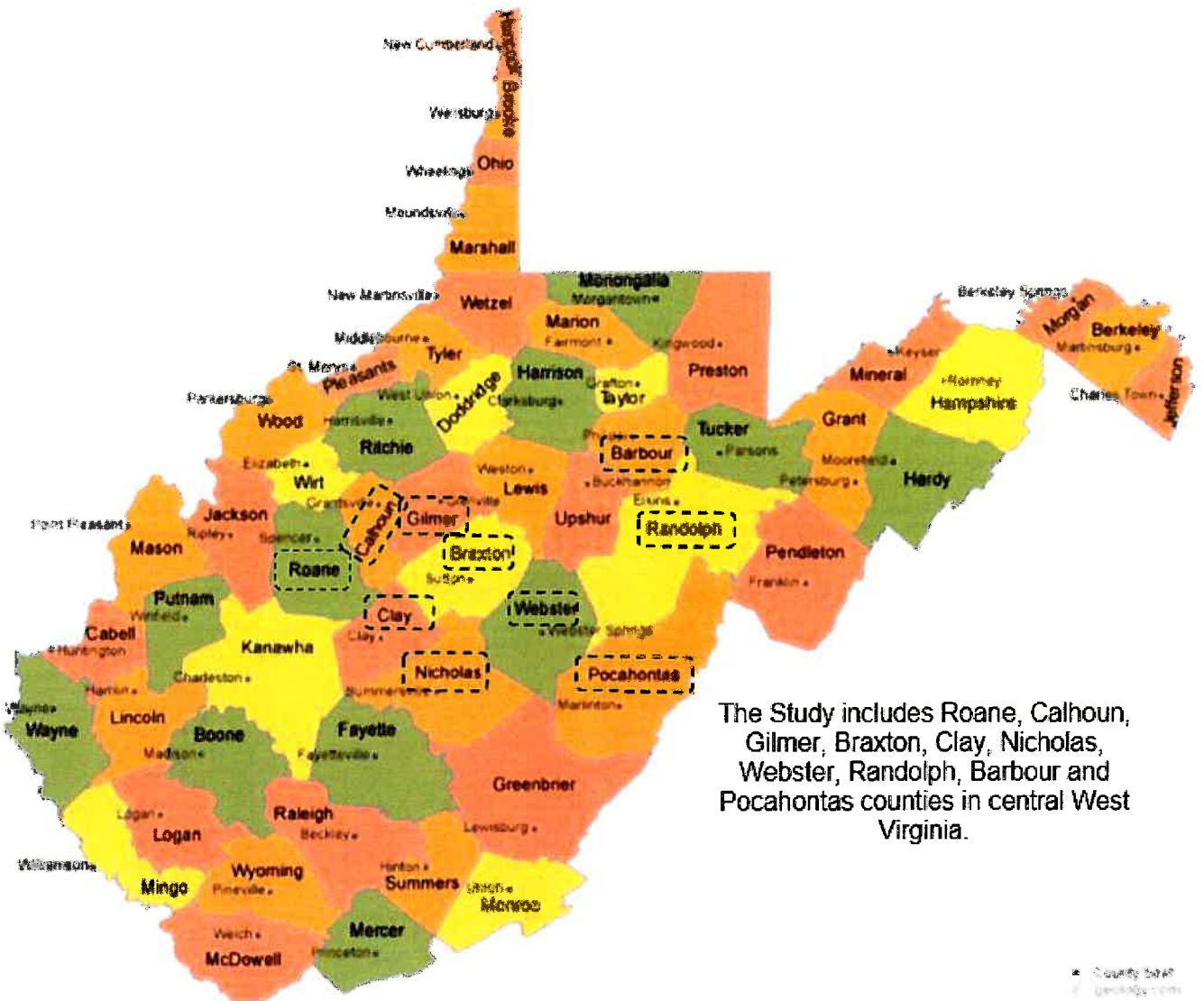


Fig 2.0 West Virginia County Map

This main premise of this Study is to investigate the feasibility of constructing and operating a middle-mile broadband infrastructure project for underserved areas within the Companies' West Virginia service territory.

The model that would best support the utilization of new and existing Company infrastructure to allow the incorporation of last mile broadband providers into a Company middle mile solution would be as shown below in Figure 3.0:

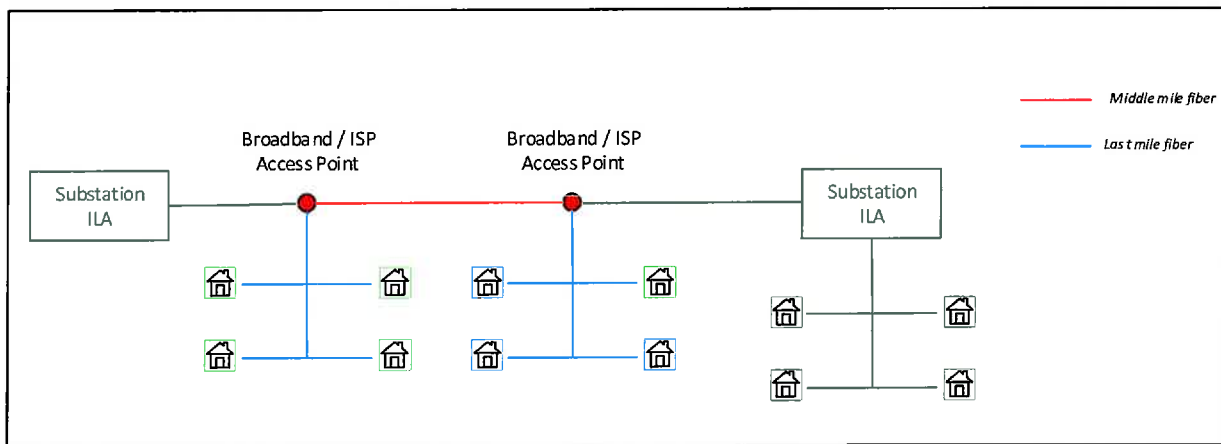


Figure 3.0. Proposed model for Broadband connectivity

### Proposed Scope of Work –The Counties proposed fiber solution

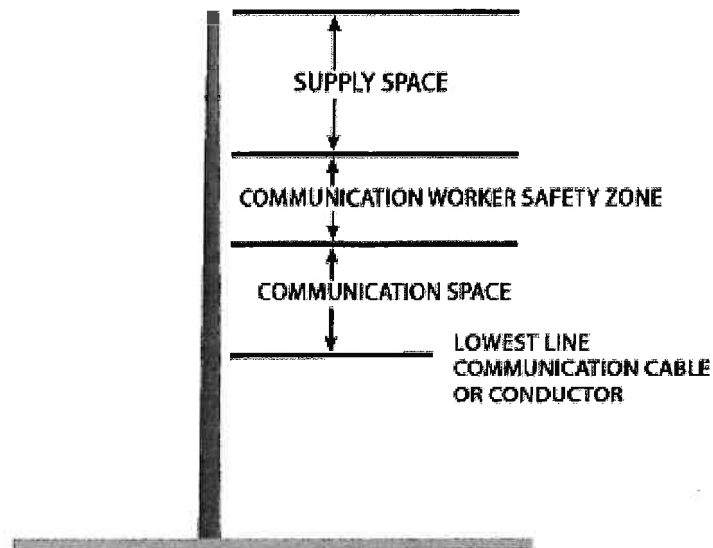
The proposed project scope of work associated with this Study covers the following items:

- a) The identification of the middle-mile fiber routes across the Counties,
- b) The estimated costs of the proposed solutions
- c) The estimated schedule of implementation

The proposed solutions would provide in total approximately 431 miles of physical fiber across ten counties covering three separate project areas. . These three initiatives include Roane EDA, Pocahontas Greater Valley Economic Development (GVEDC) and the Randolph/Barbour County

Southern Route. The plats in Appendix B-D show geographically the three projects individually. The proposed solution would provide dedicated dark fiber strands to local Internet Service Providers (“ISP”) or “last mile providers” as part of the overall initiative. The preliminary design (see Appendix A) provides a ring solution that will support both: i) point to point (“PT-PT”); and ii) diverse network fiber solutions.

The proposed solution in the Counties is proposed to utilize a 144-count fiber cable in which the Companies would maintain ownership of the fiber given the proposed fiber assets residency in the power space on the poles. This is in accordance with W. Va. Code § 31G-4-5. Broadband providers require clearly articulated contractual rights to use their fibers pursuant to procedures designed to assure grid safety and reliability. Broadband providers will be allocated up to a maximum of 96 dark fiber strands for the sole purpose of providing middle mile broadband services. FirstEnergy’s standard for utility fiber construction is 48-strand cable. Figure 4.0 below, illustrates the standard zones per National Electrical Safety Code (“NESC”) standards. The “supply space” often referred to as the *Power Space* contains energized equipment that requires qualified line workers. The communication worker safety zone is a clear space buffer to provide deenergized space between communication workers and Power Space equipment. The utility fiber constructed of “All Dielectric Self Supporting” (ADSS) fiber optic cable is installed between the power space and the communication worker safety zone. Specific installations follow the Companies Construction Standards and may vary slightly based on the equipment and configuration of the electrical equipment on the pole.



*Figure 4.0. Standard infrastructure zones on joint utility pole (NESC Section 2)*

This solution would utilize new infrastructure to link multiple substations in the Counties. Additionally, it would provide a significant amount of network infrastructure that when coordinated with an approved last mile broadband service provider, would support the Council's objectives and customer needs and requirements.

Utilization of this proposed solution will be subject to W. Va. Code § 31G-4-5 given that other potential dark fiber users may show interest at any given time. Several major ISPs including AT&T, CityNet, Frontier, HughesNet, Lumos, MicroLogic, Optimum, Shentel, Suddenlink, Verizon, ViaSat and XFINITY amongst others, are currently serving the Counties. These companies offer the potential ability to utilize the Companies' proposed middle mile solution in order to enhance the impact of this initiative into unserved and underserved areas. As part of this initiative, the Companies will provide dark fiber for the purposes of middle mile communications. All capacity services, along with associated optical equipment at repeater nodes, will be installed, operated, and maintained by the broadband service provider at their cost.

The Company locations involved with this proposed solution and the project for which they belong include:

Company Location	Project Section
Goff Run substation	Roane EDA
Arnoldsburg substation	
Grantsville substation	
Glennville substation	
Burnsville substation	
Heaters substation	
Sutton substation	
Sutton Hill substation	
Ivydale substation	
Frametown substation	
Gassaway Service Center	
Otter substation	
Widen substation	
Bays substation	
Hodem substation	
Webster Springs substation	
Webster Springs Service Center	
Trout Run substation	Pocahontas GVEDC
Thorny Creek substation	
Marlington substation	
Linwood substation	
Snow Shoe substation	
Barton substation	Randolph/Barbour Southern Route
Monterville substation	
Linwood substation	
Tygart substation	
Beverly substation	
Loughs Lane substation	
Belington substation	
Barbour substation	
Elkins Service Center	

*Table 1 Company substations and corresponding project sections*

**Proposed Costs –The Counties proposed fiber solution**

The Companies have established a preliminary estimate of the required capital investment to implement the proposed solutions across the Counties. Additionally, an estimate has been

provided for the annual operational and maintenance (“O&M”) expense of the solutions. These estimated costs are shown in Table 2 below. The cost basis for these estimates incorporate current costing models, empirical data and industry projections that are looking ahead near term.

Project Section	Estimated Network Route Length	Estimated Capital Investment	Estimated O&M (annual) <sup>10</sup>
Roane County EDA	247 Miles	\$41.31 M	\$1.2 M
Pocahontas GVEDC	84 Miles	\$14.05 M	\$0.4 M
Randolph/Barbour Southern Route	100 Miles	\$16.72 M	\$0.5 M
<b>Total</b>	<b>431 Miles</b>	<b>\$72.08 M</b>	<b>\$2.1 M</b>

*Table 2 Estimated Project Costs*

The estimated capital costs provided take into consideration geographical and geological considerations that are typical for the Counties. The scope for the preliminary capital investment estimate includes, but is not limited to, the following items:

- Formal engineering in accordance to governing standards
- Permitting that is in alignment with Federal, State and Local requirements
- Easement appropriation
- Material and construction including new pole installation, reinforcement of, and attachment to, existing poles
- Fiber cable and installation including splicing, testing and related materials
- Project management
- Necessary substation and network upgrades to utilize the fiber, e.g., fiberhuts, SCADA, electronics.

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<sup>10</sup> Annual estimated O&M amount begins in year 4. See table 3 with depiction of ramp up years.

O&M estimates have been included based upon typical data for similar activities within the region.

The estimated construction timeline for this proposed endeavor is 3-4 years. This timeframe is subject to change due to the influence of approvals including, but not be limited to, regulatory approvals, and permitting requirements at federal, state and local levels.

Based upon the estimated project costs depicted in Table 2 and described above, the Companies developed an estimate of the annual revenue requirements and the impact on an average residential customer, assuming 1,000 kWh average monthly usage. Table 3 below summarizes the estimated annual costs, revenue requirement, and residential customer impact during the initial four-years. In addition, three scenarios are included showing the impact of illustrative low, medium and large lease revenues, which are used to help offset the revenue requirement. Revenue requirements, lease revenues, and cost recovery will continue beyond year 4 to reflect continued recovery of the return on and of capital through its depreciable life, as well as on-going O&M expense. The calculation of the revenue requirement is based upon a rate of return of 7.64%, which is a weighted value for Mon Power and PE combined for the test year ending December 31, 2013,<sup>11</sup> utilizing the weighted cost of the Companies' long-term debt and the return on equity last authorized by the Public Service Commission of West Virginia ("PSC"). Although the values in Table 2 below illustrate an average monthly impact to residential customers, costs have also been allocated to the small and medium non-residential customer classes consistent with allocation methodologies utilized in the Companies' prior base rate proceeding.

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<sup>11</sup> A test year ending December 31, 2013 is the basis for the establishment of existing rates for the Companies.



Year	In Service Capital	O&M	Revenue Requirement	Scenario	Residential \$/kWh	Average Monthly Residential Impact
1	\$22,379,964	\$0	\$1,606,791	Low lease revenues	\$0.00017	\$0.17
				Medium lease revenues	\$0.00014	\$0.14
				Large lease revenues	\$0.00010	\$0.10
2	\$26,591,764	\$663,057	\$6,037,427	Low lease revenues	\$0.00065	\$0.65
				Medium lease revenues	\$0.00059	\$0.59
				Large lease revenues	\$0.00050	\$0.50
3	\$23,110,682	\$1,450,899	\$10,298,312	Low lease revenues	\$0.00111	\$1.11
				Medium lease revenue	\$0.00101	\$1.01
				Large lease revenues	\$0.00089	\$0.89
4	\$0	\$2,135,605	\$11,922,851	Low lease revenues	\$0.00127	\$1.27
				Medium lease revenues	\$0.00114	\$1.14
				Large lease revenues	\$0.00098	\$0.98

*Table 3. Estimated Residential Impact*

**RATIONALE FOR PROJECT SELECTION and REQUEST FOR FLEXIBILITY**

These three projects have been selected after due diligence and evaluation based on:

- a. the current status of unserved and underserved residents and businesses in the area.
- b. The current status of utility communication between electric substations in the area.

- c. The perceived interest in the area by potential ISPs and others, including county commissions, planning and development organizations, and businesses.
- d. The pending funding applications to Reconnect, RDOF, and other grants and loans.
- e. The ability to interconnect these three separate projects into one giant loop. Additionally, there is an existing ADSS line running from Parkersburg to Sutton which the Companies believe can be inspected and reconditioned in order to tie this large giant loop into existing infrastructure along the Route 50 corridor from Parkersburg to Clarksburg. The existing line is shown in red on Appendix A and B. While this existing line would not be for use by ISPs, the tie-in would greatly add value to both the overall project providing an even larger loop of interconnection. This tie-in from Parkersburg to Sutton is proposed as part of the Roane County project.

The Companies specifically request the flexibility be granted by the Council for the Companies to be able to pivot among these three separate projects and to alter the capital spend, timeline, and project implementation based on the changing circumstances in the future. Many of these projects having pending grant applications with Reconnect or RDOF or have other matters demanding their capital requirements. The awarding (or not awarding) of monies to those three projects identified and their participating entities will impact whether, how and when these projects may proceed. The Companies request the flexibility to be able to alter their plans in the future based on these changing circumstances so that capital funds are spent the most efficiently and wisely as possible with benefits inuring to the greatest extent possible. While the Companies are anxious to participate in these exciting projects, they do not want to expend capital resources that are not overall efficient or effective.

## **Regulatory and Legal Barriers**

The West Virginia Small Wireless Facilities Deployment Act established a voluntary program whereby each electric utility may investigate the feasibility of constructing and operating a middle-mile project within the electric utility distribution system. The Study shall include an evaluation of “the regulatory and legal barriers to an electric utility constructing a project and

operating middle-mile broadband infrastructure to provide access to unserved areas of the state, as defined in §31G-1-2 of this code, and any underserved areas of the state, and proposed legislation to address such regulatory barriers” to support broadband expansion.

Additionally, the Act requests the electric distribution utility identify the proposed project’s rate adjustment necessary to recover proposed project costs and the reasonable rate of return, on an expedited basis, that will be recovered by the electric utility through a rate adjustment, which has been identified in Table 3 and described above.

The Companies have addressed areas for consideration by the Council in order to enable such technology.

#### 1. Cost Recovery

The Act provides a mechanism necessary for the Companies to recover costs in a full and timely manner through a surcharge or similar mechanism. Ensuring the full and timely recovery of program costs is important for multiple reasons, including providing transparency of the costs, recognizing the customer rate impact of the services being delivered, and facilitating the utility’s ability to offer such programs. It is essential that: 1) all costs incurred to perform the Study are fully recoverable; and 2) the PSC approve full and timely cost recovery for electric utilities implementing approved projects, including a return on capital investment, costs related income taxes at the statutory rate, depreciation, O&M, property tax expenses, and other expenses associated with the project, as well as a reconciliation mechanism to true-up forecasted costs and revenues with actual costs and revenues. The aforementioned items are reflected in the revenue requirement calculations in Table 3, which, along with a surcharge or similar mechanism, assures expedited cost recovery along with a reconciliation of costs and revenues.

In the 2020 legislative session, Enrolled Committee Substitute for HB 4619 passed to provide cost recovery detail and assurance. Such cost recovery detail and assurance are critical to any of the Companies' projects proceeding. The Companies are satisfied with the new legislation and will provide the necessary information to the Public Service Commission to demonstrate the benefit to these projects and obtain approval for cost recovery.

## 2. Telecommunication Services Agreements and Providers

FirstEnergy and its utilities currently do not operate competitive telecommunications services. FirstEnergy Telecom Services sold its competitive fiber services to First Communications in March 2008, and that competitive fiber business was subsequently acquired by Zayo Group in December 2012. Under the terms of these agreements, Zayo Group manages FirstEnergy's fiber network – including activities such as engineering, project management, maintenance, repairs, documentation, and operation monitoring.

Additionally, it is critical that Internet Service Providers are available in the project areas and willing to construct and invest capital to serve the last mile to customers. Not having ample ISPs or ones willing to commit to invest and serve are a strong barrier to broadband service deployment.

## 3. Asset Classification

A middle-mile fiber asset project within the electric utility distribution system should be considered as a utility asset to better streamline the approval and cost recovery processes necessary through the PSC. The utility would own the middle mile fiber and

could allocate excess or surplus fibers by utilizing capacity marketing services for our Fiber Management Services provider, Zayo.

The project and any implementation shall require that electric service shall take priority over the infrastructure project for safety and reliability reasons, including restoration of service.

#### 4. Easements and Rights of Way

Middle-mile development will benefit from further clarification around existing utility easements. So long as the infrastructure is owned by a utility, the utility shall have the authorization to lease or assign all or portions of the infrastructure to participants. This placement of infrastructure on the utility poles and/or leasing/assignment shall not be construed as unlawful, an interference or an additional burden on the land or with any landowner by such placement, construction, operation, maintenance, leasing or assignment of infrastructure.

The proposed project and any implementation shall recognize that electric service takes priority over the infrastructure project for safety and reliability reasons, including restoration of service. It will be important that utilities maintain sole and exclusive control over the area surrounding the electric facilities.

#### 5. Interconnections

The middle-mile development must necessarily interconnect with other providers who supply the first and last mile(s) of fiber. Per Senate Bill 3 §31G-4-5 (f) "In its consideration of the feasibility of a project, the council shall identify one or more last-mile broadband Internet providers that may lease the middle-mile broadband Internet capacity created by the proposed project pursuant to lease terms and conditions set by the council." The broadband provider(s) will be responsible for providing all "lit" capacity

services – including any repeater nodes along the middle mile fiber path, connecting to and communicating with their head-end ISP Point of Presence, and providing “last mile” distribution of the Internet service to prospective end-customers. The electric utilities will provide rack space and power at colocation facilities (distribution substations or communication shelters) along that path to accommodate the broadband providers’ equipment, which they are expected to lease at a fair market rate.

It is important that those interconnections are authorized and permitted so that the entire fiber – from start to finish – can be connected. Once the broadband service providers are selected in the target communities, the utility will need to coordinate the interconnection points at the remote end (i.e. in the target communities) and at the source end (i.e. where the provider will interconnect to their Internet Point of Presence).

Additionally, the utility will need to coordinate with the broadband provider(s) to identify at which intermediate sites the provider(s) will need to collocate for the purpose of installing repeater nodes along the middle mile path, including rack space and power leased from the utility.

#### 6. Electric utility exemption from FCC regulation

The FCC should not regulate utilities as part of these projects. For those companies that have competitive telecom affiliates (which FirstEnergy sold in March 2008), this is a non-issue since those competitive companies already operate within FCC jurisdiction as they provide middle mile and/or last mile telecommunications services. However, the FirstEnergy utilities do not have the expertise or staffing to operate as a telecom carrier. That requires a deep understanding of that regulatory environment. In the West Virginia legislation to be introduced in the 2020 session, it should be made clear that

West Virginia utilities are not considered to be competitive telecoms subject to FCC jurisdiction. Enrolled Committee Substitute HB 4619 made it clear that electric utilities are authorized and permitted to own, operate and maintain middle-mile broadband in the state of West Virginia through PSC utility jurisdiction.

## **Conclusion**

The Companies appreciate the opportunity to submit the proposed Study to the Council. We acknowledge per §31G-4-5 that the Council will be engaging in decision-making process as to the feasibility of the proposed submitted projects. We believe these projects are viable and needed by the State of West Virginia. We specifically request the flexibility be granted by the Council for the Companies to be able to pivot between projects and to alter the capital spend, timeline, and project implementation based on the changing circumstances in the future. Many of these projects having pending grant applications with Reconnect or RDOF or have other matters demanding their capital requirements. The awarding (or not awarding) of monies to those three projects identified and their participating entities will impact whether, how and when these projects may proceed. The Companies request the flexibility to be able to alter their plans in the future based on these changing circumstances so that capital funds are spent the most efficiently and wisely as possible with benefits inuring to the greatest extent possible.

As discussed throughout the document, there are challenges that must be addressed before the Companies could embark on moving forward with the proposed project presented in the Study. We look forward to working with the Council and others in order to be able to proceed successfully and as quickly as possible.

The Companies support emerging technologies and investment in the electric distribution infrastructure to meet expected future customer expectations, as well as to enhance long-term

distribution system safety, reliability, resiliency, community support and economic development in West Virginia. We look forward to our continued communication on this initiative.

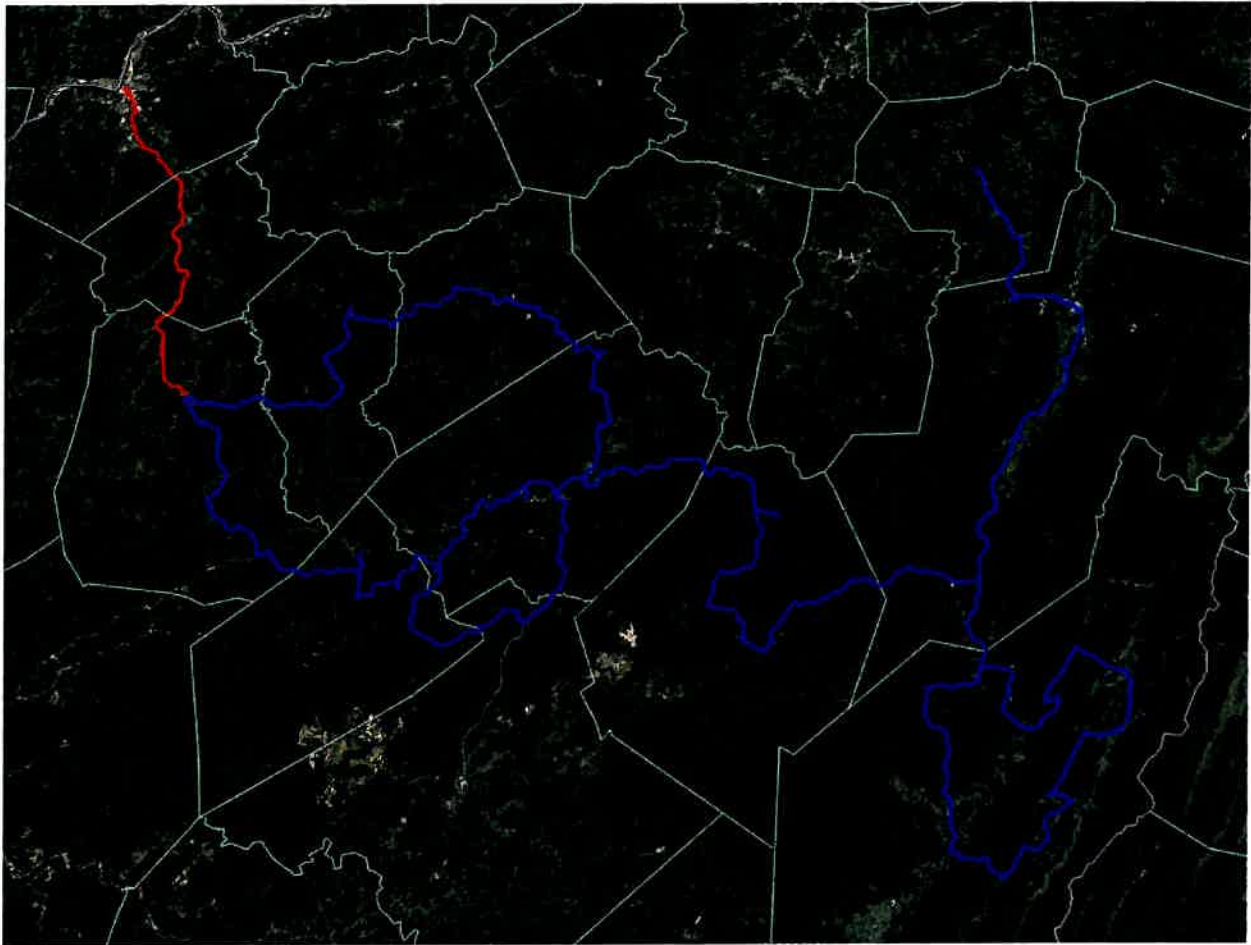
Respectfully submitted,

  
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Monongahela Power Company  
The Potomac Edison Company

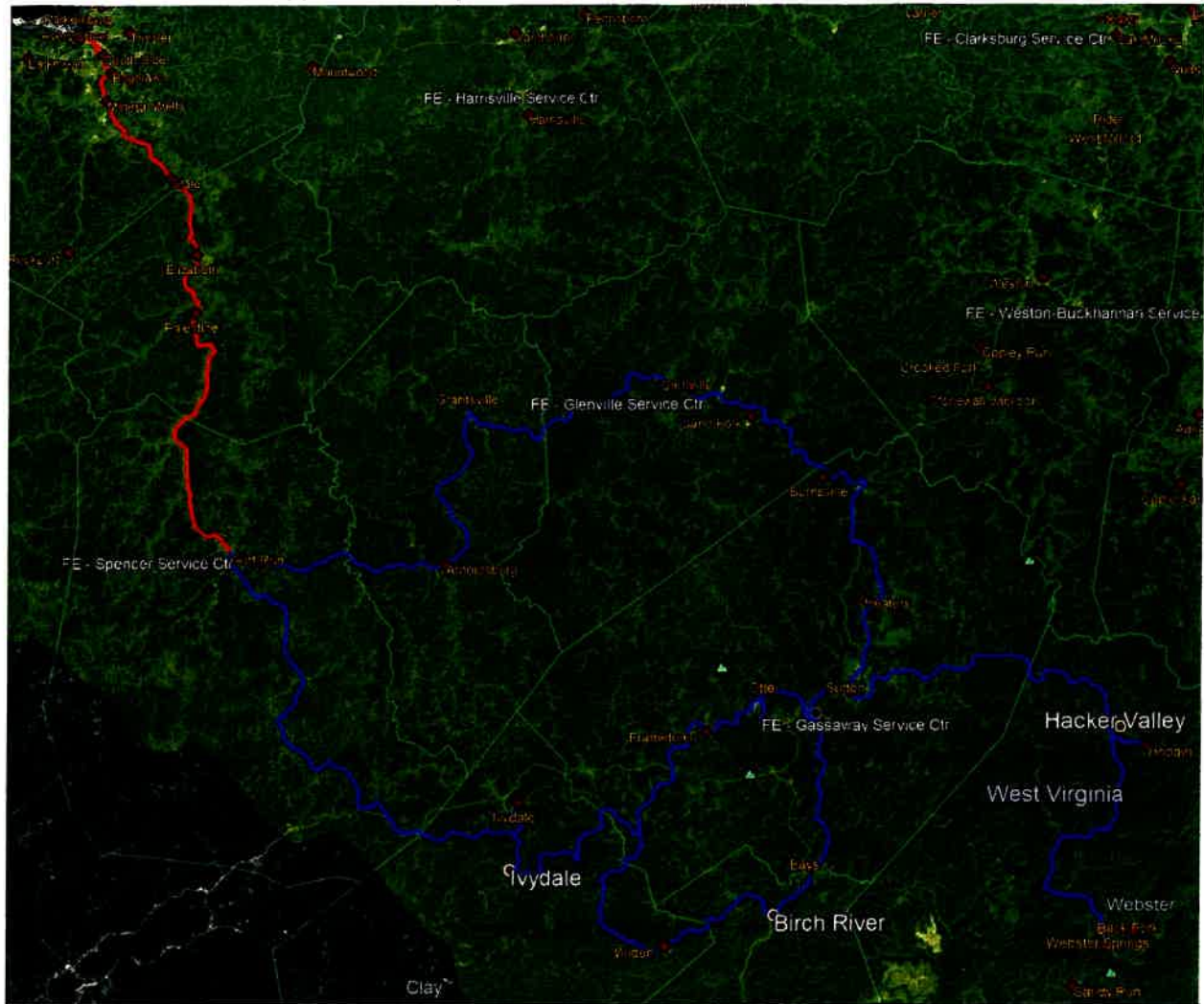


## Appendix

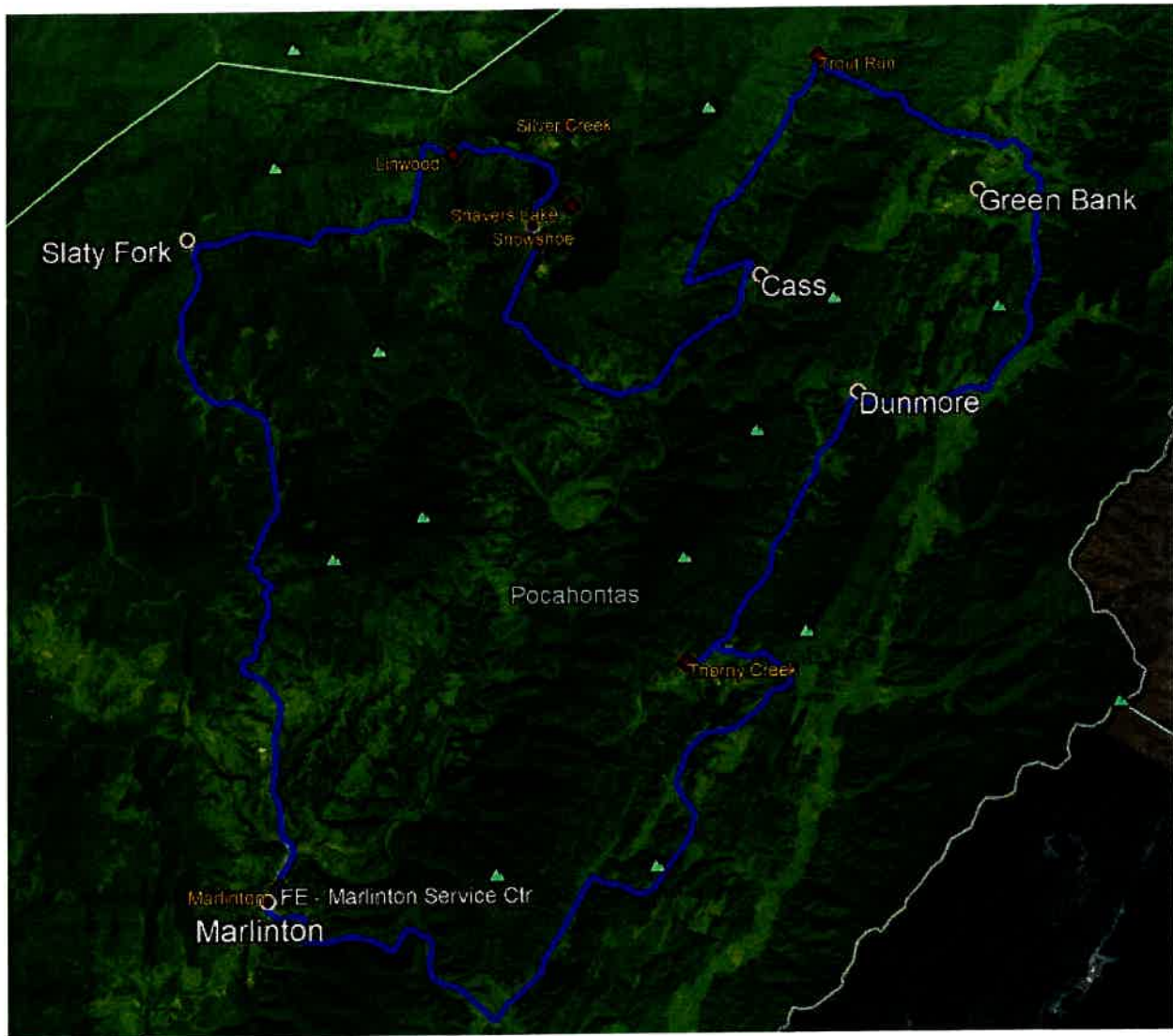
### Appendix A. Proposed broadband solution for the 10 selected counties



## Appendix B. Proposed broadband solution for Roane EDA



Appendix C. Proposed broadband solution for Pocahontas GVEDC



### Appendix D. Proposed broadband solution for Randolph/Barbour Southern Route

