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From

**UNDERSTANDING THE DEBATE
OVER GOVERNMENT-OWNED
BROADBAND NETWORKS:**

Context, Lessons Learned, and a Way
Forward for Policy Makers

Bristol Case Study (updated)

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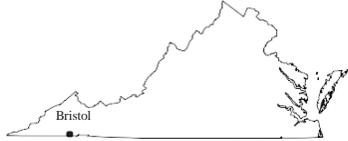
**NEW YORK
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Updated Case Study of Bristol, Virginia

The failed municipal broadband network in Bristol, Virginia, BVU OptiNet, was once touted by the FCC in its National Broadband Plan as a “good example of the potential of community broadband.”¹ It was later cited by the Obama White House in a report promoting government ownership of broadband networks.² Both the FCC and the White House missed the mark in their praise. The government-owned broadband network (GON) in Bristol is now in the process of being sold at a loss to a private company.

The ongoing dissolution of this municipal system should be seen as yet another cautionary tale in the ongoing story of municipal broadband ownership in the United States. While GONs advocates will likely continue to advocate for municipal broadband despite the paucity of supporting data or success stories – and despite an abundance of failures – the failed network in Bristol highlights both (i) the array of risks of entering a competitive broadband market and (ii) the many challenges in unwinding a failed GON. The latter point is especially relevant given arguments made by pro-GONs advocates and authors of feasibility studies attempting to frame a municipal network as a valuable asset that can be easily sold off if a network struggles.³

**Bristol, Virginia
At-A-Glance**



City Population: 17,662 (2012)

Year of Network Launch: 2002

Type of Network: FTTH

Current Status: **Failed** / Being Sold at Loss

Peak Number of Subscribers: ~14,000 (across entire footprint)

Cost to Deploy: ~\$130+ million

Sale Price: \$50 million

As detailed below, the fall of the GON in Bristol offers policymakers a number of important lessons learned that might prove useful when evaluating future proposals for a municipal network. These include:

- Early “success” of a GON (*e.g.*, apparent financial stability) often proves to be fleeting.
- The importance of implementing strict transparency and auditing requirements before, during, and after any GON-related project. The public must be able to see how their tax dollars are being spent so that they can help prevent the kind of waste, corruption, and impropriety that has contributed to failures in Bristol and elsewhere.
- Having in place an exit strategy for when a GON fails. As this case study makes clear, unwinding a failed municipal system is extremely complex, costly, and time-consuming.
- Ensuring that the full costs of unwinding a system – including litigation, audits, investigations, etc. – are taken into account from the start when weighing whether the potential benefits of a GON outweigh its significant overall price tag.

BACKGROUND

In 1999, BVU, the board of Bristol’s municipal utility, and the Bristol City Council approved construction of a fiber-optic network to enhance communication between the utility’s eight electric substations.⁴ Later that year, the City Council voted to expand the network to connect all city offices, including City Hall,

public schools, libraries, and the police and fire departments.⁵ Looking beyond purely municipal functions, the council initially planned to partner with a private ISP in an effort to facilitate commercial broadband service to residents, but the city eventually opted to build that portion of the network itself.⁶ To that end, the BVU board in 2001 approved an engineering study to determine the cost of providing FTTH service to all potential customers – public and private – throughout the utility’s service territory.⁷

Efforts to expand the municipal network for commercial purposes faced numerous challenges from multiple parties, including the ISPs that were already serving the city. For example, one such incumbent argued that Virginia law barred municipalities from offering retail telecommunications services.⁸ In response, Bristol sought a declaratory judgment from a federal court stating that the relevant state law was unenforceable because it was superseded by the 1996 Telecommunications Act.⁹ The court agreed with the city and, in 2001, ruled that the state law was “preempted by the Federal Telecommunications Act of 1996...and is therefore invalid and unenforceable under the Supremacy Clause of the Constitution.”¹⁰ The law at issue was amended by the Virginia legislature, and BVU was eventually allowed to offer commercial communications services.¹¹

In 2002, BVU began to deploy its network in the Bristol area.¹² During construction, the utility partnered with Cumberland Plateau Company (CPC), a nonprofit subsidiary of the Cumberland Plateau Planning District Commission, to expand the GON to industrial and business subscribers beyond Bristol in southwest Virginia.¹³ This extension was funded by several state and federal grants, including a \$1.6 million allocation from the U.S. Department of Commerce and a matching grant from the Virginia Tobacco Indemnification and Community Revitalization Commission.¹⁴ The state funds stemmed from a sizable legal settlement with the tobacco industry.¹⁵

In 2009, the City Council asked the Virginia General Assembly to allow BVU to transition from city ownership to an independent authority owned by the state (BVU moved for independence so that it could legally expand its territory).¹⁶ Amid controversy,¹⁷ the state legislature established the BVU Authority as an organization independent from the city and regulated by the state.¹⁸ As a result, the Bristol City Council no longer approved the decisions of the BVU Authority Board.¹⁹

Recent years have been fraught with an array of setbacks and challenges for the failed GON. The Authority’s failure to institute proper internal protocols and policies led to a number of fraudulent actions, including “misuse of public funds, evasion of employment taxes, failure to report employee income to the Internal Revenue Service for income tax purposes, bid-rigging, procurement violations, and State and Local Government Conflicts of Interest Act violations.”²⁰ Federal corruption charges were brought against some of the parent utility’s leadership,²¹ resulting in a number of convictions²² and subsequent legislative changes to rein in the utility.²³

In the midst of these foundational setbacks, BVU in early 2016 received an unsolicited offer from Sunset Digital to purchase the GON’s assets for \$50 million – *a price tag that is substantially less than the total amount used to deploy the network (see next section).*²⁴ As some of OptiNet’s leadership felt that the GON was no longer competitively viable, this offer was positively received²⁵ and was approved unanimously by the utility’s board.²⁶ Shortly thereafter, in April 2016, the deal was brought before the Bristol City Council, where the sale was approved 4-1.²⁷ However, due to the many entities with a financial stake in the GON – from grant-making organizations to those holding debt – many more subsequent approvals are needed before the sale can be closed. Indeed, the approval process was initially expected to last between 120 and 150 days,²⁸ but the deadline for finalizing the sale has been extended twice to December 31, 2016 to allow time for stakeholders to address the many unanticipated complications related to debt and priority.²⁹

COST AND FINANCING

To date, in excess of \$132 million has been spent on this failed GON (some \$82 million and counting in excess of the current \$50 million sale price), with a significant percentage of the GON’s cost coming from several rounds of municipal bond issuances.³⁰ During the initial phase of construction, for example, BVU

spent \$13.6 million for equipment and network infrastructure.³¹ To fund these and other network costs, \$27.5 million in revenue bonds were issued in 2003, secured by the utility's assets.³²

BVU has also received tens of millions of taxpayer dollars in one-off grant funding from an array of federal and state entities. For example, deployment of the GON has been fueled by more than \$24 million in federal grants since 2003,³³ with an additional \$28.4 million coming in July 2010 via the federal stimulus program.³⁴ These funds were allocated to BVU in support of a "388-mile fiber addition to its existing network that would bring up to 10 Gbps middle mile service to a rural, eight-county region of southwestern Appalachian Virginia."³⁵ With regard to state-specific grant funding, BVU has received over \$30 million through 16 separate "monetary grant awards"³⁶ from the Virginia Tobacco Commission between 2003 and 2011.³⁷ BVU used these grants, in turn, as matching funds for a NTIA/BTOP grant.³⁸

A 2015 audit of BVU revealed that the utility had \$48 million in long-term debt.³⁹ Of this, \$24.4 million was allotted to OptiNet specifically.⁴⁰ The full picture of the GON's debt, though, is substantially more complicated and cloudy as a result of intra-utility loans between divisions. When the original network was constructed, the broadband division borrowed money from BVU's electric system. This debt was eventually capitalized and has yet to be repaid.⁴¹ In lead up to the network's sale, yet another audit found that in 2007 the BVU Authority "improperly removed from the financial statements all of an interfund receivable/payable in the amount of \$23,393,517 between the Electric Division and the OptiNet Division."⁴² The debt transaction occurred when BVU's electric division provided funds to OptiNet for working capital that was needed to build out the network's infrastructure.⁴³ Later, BVU used its new cross-subsidization abilities granted by legislative amendments to eliminate the \$23,393,517 in debt.⁴⁴ In the process of this inter-fund debt elimination, BVU calculated OptiNet's portion of the debt using the division's fair market value rather than the amount of debt associated with the network.⁴⁵ The audit found that this methodology was improper.⁴⁶ Because of this undue debt cancellation, the utility was deprived of over \$4.6 million in interest.⁴⁷ BVU will now have to restore the OptiNet debt and interest in the amount of \$13.754 million.⁴⁸ This may have a material effect on the sale, the sale proceeds distribution, and consumers.⁴⁹

It is likely that the GON's failure and sale will negatively impact BVU's ratepayers. The nearly \$14 million in debt that was unearthed by the state's audit will presumably be passed on to ratepayers and customers. In the wake of the debt's reinstatement, BVU has weighed a rate increase to cover the newly discovered costs.⁵⁰ In July 2016, the Authority approved a cable rate increase of 10 percent in part as a response to the debt.⁵¹ In addition to increased rates, the utility may also invest less in new territories.⁵²

THE NETWORK

The GON in Bristol was launched with much fanfare and was promoted with much optimism by local officials and supporters, especially with regard to the hoped-for ability of the network to help bolster economic development and transform the city.⁵³ In just a few short years, though, these predictions were proven wrong.

By early 2012, the BVU network passed 35,000 homes and businesses.⁵⁴ BVU OptiNet eventually succeeded in signing up between 13,400⁵⁵ and 14,000 subscribers.⁵⁶ Under its OptiNet brand, BVU offers voice, video, and data services to customers via its FTTH network. Service options range from a 50 Mbps stand-alone broadband connection for \$39.95 per month to \$269.95 per month for an asymmetrical 1 Gbps connection.⁵⁷ Television and telephone services are also available as stand-alone products or as part of a bundle.⁵⁸

BVU OptiNet presented itself as financially viable for a short period. In 2013, for example, the system posted a \$2 million profit⁵⁹ with modest growth.⁶⁰ But as with other failed and struggling GONs, these early indicators proved to be overly-optimistic. In addition to its substantial debt-load, OptiNet had an operational deficit of \$1.1 million by April 2016.⁶¹ The GON is expected to suffer an additional loss of \$1.5 million in the 2015-2016 fiscal term.⁶² These losses are expected to continue for fiscal years 2016 and 2017 as well⁶³ and may have a material negative effect on the ability of the network to cover the principle and interest of its bonds.⁶⁴

COMMUNITY IMPACT

While the Bristol GON has received praise, *evidence of actual positive impacts is scant at best*. One leading example: defense contractor Northrop Grumman's decision to build a new data facility in the BVU service territory.⁶⁵ Although the company highlighted the local network as one of the reasons for locating the center in the area, Northrop had already committed to building the facility somewhere in Virginia.⁶⁶ In particular, Northrop and the state of Virginia had previously entered into a 10-year, \$2.4 billion contract whereby the private contractor would "overhaul the state's computer networks" and otherwise manage critical aspects of the newly created Virginia Information Technologies Agency.⁶⁷ (Northrop was already one of the largest employers in the state.) As such, the jobs and investment stemming from the new facility in southeast Virginia were expected and cannot be reasonably attributed to the GON alone.

While other jobs have come into existence since construction of the GON, there is no evidence of any causal relationship. DirecTV, for example, hired 100 locals for a "virtual call center" in 2010.⁶⁸ These new employees work from home and earn \$10 per hour.⁶⁹ While broadband generally is necessary to support these jobs, the presence of the GON cannot credibly be linked to bringing these jobs to fruition.⁷⁰

Alpha Natural Resources, a large coal company, built its new headquarters in Bristol, Virginia, the heart of "coal country." There is debate about the role that broadband played in the company's decision to stay in Bristol.⁷¹ Ultimately, an array of multi-million dollar tax incentives offered by the city and state was a major factor in the decision-making process.⁷² Location in coal country was another consideration.⁷³

For Bristol, the decision to create an independent BVU Authority has long been a divisive issue.⁷⁴ There has been significant debate at the local level regarding the merits of providing broad independence to an entity that oversees a network built with taxpayer resources. Although the use of such public authorities is a standard practice in other states, some residents accused the city of shifting to an authority model in an attempt to prevent public scrutiny of a project that had amassed significant debt⁷⁵ – an accusation that, in hindsight, has proven to have much merit. Creating a quasi-independent authority allowed the city to remove the GON's tens of millions of dollars of debt from its books and freed the new entity to assume even more debt and grow beyond the boundaries initially set for it.⁷⁶

ASSESSMENT

Like many other GONs across the country, the failed municipal broadband network in Bristol has significant debt. Indeed, the proceeds of the sale of the GON may not be enough to cover its debts. Whether the benefits of the system outweighed the significant public resources that were used to build it is a dubious proposition at best.

The GON in Bristol, much like GONs in Chattanooga and elsewhere, owes its existence in large part to significant federal and state grant funding unlikely to be replicated over the long term. For example, the failed Bristol network benefited from over \$30 million in state funding that stemmed from a major legal settlement with the tobacco industry in the 1990s⁷⁷ – funds that could have otherwise been allocated to other, more pressing areas like education or healthcare or shoring up crumbling public infrastructure (see below).

Bristol's failed GON suffers from the same challenges that many other municipal broadband systems face: intense competition from incumbent ISPs. Indeed, competitive marketplaces like the one for broadband are fundamentally different from the monopolistic markets of the utilities sector. BVU Authority Board Chair Jim Clifton noted the dissimilarity: "that's a big difference between rate payers and customers. Ratepayers don't have much choice. They have to buy electric. They have to buy water. They have to buy sewer. [Broadband] customers have a choice."

The Bristol experience also highlights how the cozy relationship between local government, utilities, and GONs operated by those utilities can result in improprieties and provide unfair competitive advantages to

a municipal network. OptiNet was the recipient of such advantages. A 2016 audit determined that the BVU Authority was drastically under-charging the GON for pole attachments.⁷⁸ BVU's Electric Division had been billing the GON for 3,958 pole attachments when OptiNet was actually using 10,113 pole attachments.⁷⁹ The Electric Division was also billing at substantially lower rates than the contracted rate: \$13 rather than \$25.50 for the attachments.⁸⁰ This allowed OptiNet to avoid at least \$253,433 in annual payments.⁸¹

The sale of the GON to a private company at a fire-sale price adds an additional wrinkle. Parties are now vying for revenues from the sale and seeking to establish priority. The dissolution of the GON was originally characterized by BVU CEO Don Bowman as a way to alleviate the utility's \$48 million in long-term debt, but this is increasingly uncertain.⁸² The city of Bristol has also staked a claim on sale proceeds, citing a 2009 agreement between the city and the utility; section 5(c) of that agreement states that, "In the event that the OptiNet division is sold to a third party, the net proceeds after repayment of OptiNet debt and the equity investment shall be split evenly between the city and the authority."⁸³ This arrangement would seem to limit BVU Authority's ability to cover its debts via the sale. Some of the GON's other financial backers are looking to move the debts owed to the electric system to the back of the line.⁸⁴ Many of the public grants that were the foundation of OptiNet infrastructure buildout have claw-back mechanisms in place that require repayment upon the sale of assets purchased with those funds.⁸⁵ The Tobacco Commission is one such agency that has expressed a desire to seek repayment.⁸⁶ In short, policymakers should take caution: unwinding such a complex asset can be extremely costly and troublesome.

OptiNet's financial improprieties and subsequent attempts to cover its debt makes clear who really bears the risk for failed municipal networks: the taxpayers. The discovery and subsequent reinstatement of nearly \$14 million of debt onto OptiNet's books will likely be borne by the utility's captive ratepayers. The utility is weighing rate increases and has signaled that they may have to limit investment in some territories. Ratepayers, even those who never even contemplated subscribing to OptiNet's services, will now have to pay more and get less. That is a heavy burden.

Finally, the misguided decision to invest tens of millions of dollars of public funding in this failed GON resulted in resources not being allocated to shoring up failing infrastructure in the Bristol area, as well as other parts of the state. Roads, bridges, and dams throughout the state are failing and in need of billions of dollars in investment over the next decade. In particular, about a quarter of its bridges are either structurally deficient or functionally obsolete, while nearly half of the roads in the state are of poor or mediocre quality.⁸⁷ In addition, the state's drinking and wastewater facilities require in excess of \$12 billion in investment by 2020 to adequately maintain and upgrade these vital elements of the state's public infrastructure.⁸⁸

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The much-touted rise and spectacular fall of the GON in Bristol underscores the many risks involved in building a municipal network. Even a system that appears to be financially viable can, and often does, become unstable, raising the possibility of impropriety as policymakers and other stakeholders attempt to save face. Bristol thus joins the long and growing list of GON projects that have failed because of tepid consumer demand, crushing debt, and the hubris of local officials who were seduced by the false promise of municipal broadband.

ENDNOTES

¹ See *Connecting America: The National Broadband Plan*, at p. 153, FCC (2010), <http://download.broadband.gov/plan/national-broadband-plan.pdf>.

² See *Community-Based Broadband Solutions: The Benefits of Competition and Choice for Community Development High-Speed Internet Access*, at p. 30, Executive Office of the President (Jan. 2015), https://www.whitehouse.gov/sites/default/files/docs/community-based_broadband_report_by_executive_office_of_the_president.pdf.

³ See, e.g., *City of Madison Fiber-to-the-Premises Feasibility Analysis*, at p. 15, Prepared for Madison by CTC Technology & Energy (Aug. 2016), <http://bloximages.chicago2.vip.townnews.com/host.madison.com/content/tncms/assets/v3/editorial/6/f6/6f687e3f-09af-55f0-bc46-b38508e6a8a4/57a963a7371d3.pdf.pdf>.

⁴ See Wes Rosenbalm, *FTTU Broadband Network Currently Offered in Bristol Virginia and Neighboring Southwest Virginia Counties Through BVU OptiNet*, at p. 3, Report to Sheryl Bailey, Executive Director Virginia Resources Authority (Aug. 2008), www.wired.virginia.gov/pdf/BVU%20OptiNet_VRA%20Governor%20Report.doc (“FTTU Broadband Network”).

⁵ *Id.*

⁶ *Id.*

⁷ *Id.*

⁸ This restriction was enacted in 1998. See HB 335, <http://leg1.state.va.us/cgi-bin/legp504.exe?981+ful+CHAP0906>.

⁹ *City of Bristol v. Mark L. Earley*, Case No. 1:00CV00173 (U.S. Dist. Va. Abington Dist. Ct May 26, 2001), <http://www.vawd.uscourts.gov/OPINIONS/JONES/CITY.PDF>.

¹⁰ *Id.* at p. 18-19.

¹¹ *Broadband at the Speed of Light* at p. 4.

¹² *Id.* at p. 6.

¹³ *Id.*

¹⁴ *Id.*

¹⁵ For additional information, see Virginia Tobacco Indemnification and Community Revitalization Commission, Home, www.tic.virginia.gov. See also James Shea, *Tobacco Dollars Extend Broadband for Southwest Virginia*, Dec. 8, 2013, TriCities.com, http://www.tricity.com/news/local/article_ea52b42c-6083-11e3-8d56-0019bb30f31a.html (“Tobacco Dollars Extend Broadband for Southwest Virginia”).

¹⁶ See, e.g., David McGhee, *BVU Spinoff Motivation Questioned*, Oct. 15, 2009, News Channel 11, <http://www.wjhl.com/story/20794222/bvu-spinoff-motivation-questioned>.

¹⁷ See, e.g., Frank Goodpasture III, *Don't Let Split Vote Take BVU from City*, Oct. 27, 2009, Tricities.com, http://www.tricity.com/news/article_4039d978-d4bd-51df-a79c-5857c180e4c9.html.

¹⁸ See BVU Authority Transition Agreement, http://static.mgnetwork.com/tri/media_path/-temp/BVU_Doc001.pdf.

¹⁹ *Broadband at the Speed of Light* at p. 3.

²⁰ See *Review of Bristol Virginia Utilities Authority*, at p. 8, Auditor of Public Accounts, Commonwealth of Virginia (Oct. 2016), <http://www.apa.virginia.gov/reports/BVUA2016-web.pdf> (“BVU Authority 2016 Review”).

²¹ See David McGee, *BVU CFO Pomrenke's Federal Corruption Trial Begins Tuesday*, Feb. 14, 2016, Bristol Herald Courier, http://www.heraldcourier.com/news/bvu-cfo-pomrenke-s-federal-corruption-trial-begins-tuesday/article_9f372087-bb3d-5abd-803a-5f3063bad9b3.html.

²² See Allie Hinds, *BVU CFO Stacey Pomrenke Found Guilty on 14 out Of 15 Counts*, Feb. 26, 2016, News Channel 11 WJHL, <http://wjhl.com/2016/02/26/jury-to-begin-deliberations-in-bvu-cfo-stacy-pomrenke-corruption-trial/>. For a full summary of convictions against BVU personnel, see *BVU Authority 2016 Review*, Appendix A – Conviction Charges, at p. 93-106.

²³ See *A Bill to amend and reenact §§ 2.2-3705.6, 2.2-3711, 15.2-2160, 15.2-7202, 15.2-7203, 15.2-7205 through 15.2-7208, and 56-265.4:4 of the Code of Virginia and to repeal § 15.2-2108.18 of the Code of Virginia, relating to the BVU Authority*, S.B. 329, Jan. 13, 2016, <http://lis.virginia.gov/cgi-bin/legp604.exe?161+ful+SB329+pdf>.

²⁴ See David McGee, *BVU's OptiNet Deal Driven by Restrictions on Cable Expansion*, March 13, 2016, Bristol Herald Courier, http://www.heraldcourier.com/news/bvu-s-optinet-deal-driven-by-restrictions-on-cable-expansion/article_ba2218d0-bb0a-5bef-a23c-06a062301c6f.html.

²⁵ See Lenny Cohen, *BVU Board Discussed Bill to Replace Leadership in Special Session*, Feb. 5, 2016, WCYB, <http://www.wcyb.com/news/bvu-board-discussed-bill-to-replace-leadership-during-special-closed-session/37839282>. BVU is subject to a number of restrictions prescribed by legislation. For instance, BVU cannot cross-subsidize its cable service, nor can

it offer cable service outside of its service area. *See also* Va. Code § 15.2-2108.11(G).

²⁶ *See* David McGee, *BVU's OptiNet Deal Driven by Restrictions on Cable Expansion*, March 13, 2016, Bristol Herald Courier, http://www.heraldcourier.com/news/bvu-s-optinet-deal-driven-by-restrictions-on-cable-expansion/article_ba2218d0-bb0a-5bef-a23c-06a062301c6f.html.

²⁷ *See* Bristol Virginia City Council Agenda, p. 559, April 12, 2016, <http://www.bristolva.org/AgendaCenter/ViewFile/Agenda/04122016-329>.

²⁸ *See* Jordon Moore, *Bristol, Va City Council Approves Sale of BVU's OptiNet to Sunset Digital Communications*, March 16, 2016, News Channel 11 WJHL, <http://wjhl.com/2016/03/16/bristol-va-city-council-approves-sale-of-bvus-optinet-to-sunset-digital-communications/>.

²⁹ *See* David McGee, *New BVU Board Approves 10 Percent Rate Increase on First Reading*, July 19, 2016, Bristol Herald Courier, http://www.heraldcourier.com/news/new-bvu-board-approves-percent-rate-increase-on-first-reading/article_bb7ff0da-d3aa-5e2e-b765-d93189cce8bf.html.

³⁰ *BVU Authority 2016 Review* at p. 24.

³¹ *Broadband at the Speed of Light* at p. 2.

³² *Id.*

³³ *See* Susan Kendall, *Moody's Assigns A2 Issuer Rating to BVU Authority (VA)*, Nov. 9, 2010, Moody's, http://www.moody.com/research/MOODYS-ASSIGNS-A2-ISSUER-RATING-TO-BVU-AUTHORITY-VA-Rating-Update--RU_16711855 ("Moody's Assigns A2 Issuer Rating to BVU").

³⁴ *Id.*

³⁵ *See* Broadband USA, Grantees—Bristol Virginia Utilities Board, <http://www2.ntia.doc.gov/grantee/bristol-virginia-utilities-board>.

³⁶ *See* David McGee, *BVU's OptiNet Deal Driven by Restrictions on Cable Expansion*, March 13, 2016, Bristol Herald Courier, http://www.heraldcourier.com/news/bvu-s-optinet-deal-driven-by-restrictions-on-cable-expansion/article_ba2218d0-bb0a-5bef-a23c-06a062301c6f.html.

³⁷ *See Funding Revitalization and Innovation in the Tobacco Region*, at p. 3, Virginia Tobacco Commission (June 2011), <http://www.tic.virginia.gov/images/VA%20Business%20Magazine%20Ads/Broadband/June%202011%20Virginia%20Business%20Magazine%20Broadband.pdf>. *See also* *Tobacco Dollars Extend Broadband for Southwest Virginia*.

³⁸ *BVU Authority 2016 Review* at p. 24. The BVU Authority used \$5.7 million of the Tobacco Commission funds and \$7.9 million of its own assets to qualify for the grant.

³⁹ *See* David McGee, *Proposed OptiNet Deal Could Generate Funds for Bristol, Va.* Feb. 8, 2016, Bristol Herald Courier, http://www.heraldcourier.com/news/proposed-optinet-deal-could-generate-funds-for-bristol-va/article_0bed32fb-ec8f-54a1-81b4-bbce3e7556a8.html.

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² *See* *BVU Authority Audit Letter*, June 9, 2016, http://www.heraldcourier.com/bvu-authority-audit-letter/pdf_8ce8cf54-2f63-11e6-a12e-ab6959b2d81c.html ("*BVU Authority Audit Letter*").

⁴³ *See* Robert Sorrell, *State Auditor: Finding Could Jeopardize BVU OptiNet Sale*, June 10, 2016, Bristol Herald Courier, http://www.heraldcourier.com/news/state-auditor-finding-could-jeopardize-bvu-optinet-sale/article_2b3a716c-3c8e-5c23-a5b0-d3117f79885f.html.

⁴⁴ *BVU Authority Audit Letter*.

⁴⁵ *See* Caleb Perhne, *BVU Audit could Delay Sale of OptiNet*, June 14, 2016, WCYB, <http://www.wcyb.com/news/bvu-audit-could-delay-sale-of-optinet/40051852>.

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ *BVU Authority Audit Letter*.

⁴⁹ *Id.*

⁵⁰ *See* Nate Morabito, *OptiNet Customers Could See Rate Increase to Cover Newly Discovered Debt*, June 15, 2016, WJHL, <http://wjhl.com/2016/06/14/optinet-customers-could-see-rate-increase-to-cover-newly-discovered-debt/>.

⁵¹ The increase in cable prices were also justified by an expected 7 percent increase in cable programing costs that are to come about in January 2017. *See* David McGee, *New BVU Board Approves 10 Percent Rate Increase on First Reading*, July 19, 2016, Bristol Herald Courier, http://www.heraldcourier.com/news/new-bvu-board-approves-percent-rate-increase-on-first-reading/article_bb7ff0da-d3aa-5e2e-b765-d93189cce8bf.html.

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- ⁵² See Nate Morabito, *OptiNet Customers Could See Rate Increase to Cover Newly Discovered Debt*, June 15, 2016, WJHL, <http://wjhl.com/2016/06/14/optinet-customers-could-see-rate-increase-to-cover-newly-discovered-debt/>.
- ⁵³ See, e.g., *Broadband at the Speed of Light*; Paul Miller, *Bristol's Broadband Push*, Virginia Business Magazine (Feb. 2006), http://www.baller.com/wp-content/uploads/Bristol_VBM_Nov06.pdf.
- ⁵⁴ *Broadband at the Speed of Light* at p. 2.
- ⁵⁵ *Tobacco Dollars Extend Broadband for Southwest Virginia*.
- ⁵⁶ See David McGee, *BVU in Talks to Sell OptiNet Division*, Feb. 5, 2016, Bristol Herald Courier, http://www.heraldcourier.com/news/bvu-in-talks-to-sell-optinet-division/article_9638a6cf-7ba0-5f6b-8547-d9c8d32cd2d4.html.
- ⁵⁷ See BVU OptiNet, Internet Packages, <http://bvu-optinet.com/index.php/residential/r-optinet/r-o-high-speed-internet/r-o-h-plans>.
- ⁵⁸ For additional information, see BVU OptiNet, Home, <http://www.bvu-optinet.com>.
- ⁵⁹ See David McGee, *BVU Reports Financial Gains, Lower Expenses*, Feb. 6, 2013, Bristol Herald Courier, http://www.tricities.com/news/local/article_f4c3103a-6dab-11e2-a07c-0019bb30f31a.html.
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- ⁶¹ See Lisa Mitchell, *BVU OptiNet Sale Proving Costly*, April 25, 2016, WCYB, <http://www.wcyb.com/news/bvu-optinet-sale-proving-costly/39207816>.
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- ⁶³ *BVU Authority 2016 Review* at p. 34.
- ⁶⁴ *Id.*
- ⁶⁵ *Broadband at the Speed of Light* at p. 3.
- ⁶⁶ See, e.g., *Fibre in Paradise*, Feb. 18, 2010, The Economist, <http://www.economist.com/node/15549324> (providing an overview of the Northrop project). See also Press Release, *Northrop Grumman and the Virginia Information Technologies Agency Open New High-Tech Facility in Russell County, Va.*, Dec. 12, 2007, Globe Newswire, <http://globenewswire.com/news-release/2007/12/12/370405/132900/en/Northrop-Grumman-and-the-Virginia-Information-Technologies-Agency-Open-New-High-Tech-Facility-in-Russell-County-Va.html> (providing additional background regarding the contractual relationship between Northrop and the state).
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- ⁷⁰ *Id.*
- ⁷¹ See, e.g., *Community Broadband Creates Jobs* at p. 1.
- ⁷² See David McGee, *\$3 million in Local Incentives for Alpha Natural Resources to Build near Sugar Hollow Park*, Nov. 13, 2009, WJHL, <http://www.wjhl.com/story/20780580/3-million-in-local-incentives-for-alpha-natural-resources-to-build-near-sugar-hollow-park> (discussing the array of local and state tax incentives).
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- ⁷⁶ *Id.*

⁷⁷ The money stems from a \$200 billion settlement with major tobacco companies in the 1990s. Funds are allocated annually to states. *See, e.g.*, Paige Winfield Cunningham, *Your Tobacco Settlement Funds at Work*, Dec. 5, 2010, Wash. Post Local Blog Network, <http://www.washingtonpost.com/wp-dyn/content/article/2010/12/04/AR2010120403000.html>.

⁷⁸ *BVU Authority 2016 Review* at p. 39.

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ *Id.*

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⁸⁶ *Id.*

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⁸⁸ *See* ASCE 2013 Infrastructure Report Card, States—Virginia, <http://www.infrastructurereportcard.org/a/#p/state-facts/virginia>.