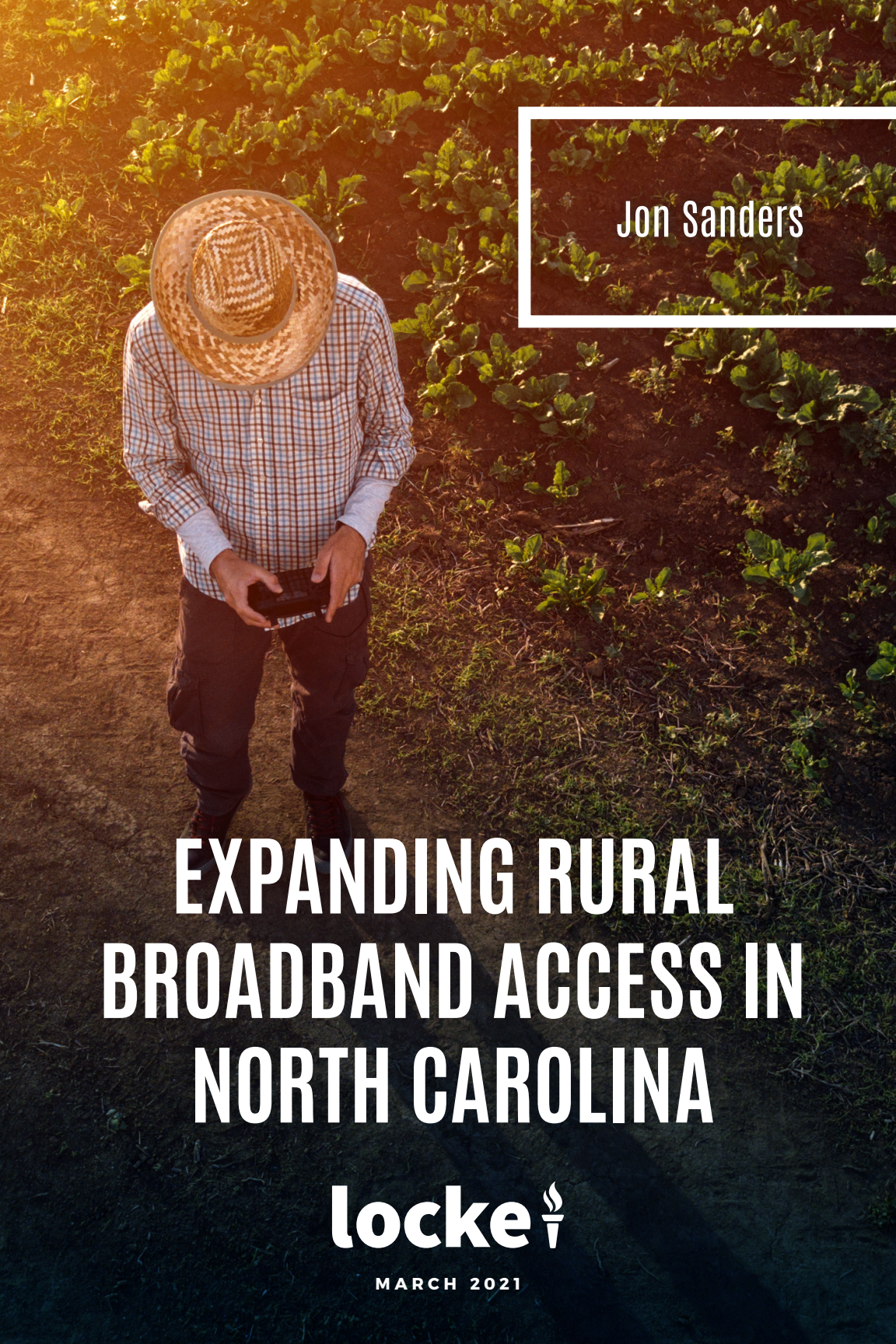

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EXPANDING RURAL BROADBAND ACCESS IN NORTH CAROLINA

locke

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Executive Summary

North Carolina policymakers have made good progress in recent years to help broadband providers close the state's rural broadband gaps. Nevertheless, some gaps remain, and the impact of those gaps has been made all the greater by the increased reliance on high-speed broadband since the COVID-19 pandemic. With meeting this need so clearly in the public interest, private investors and federal and state governments are all directing money and resources into unserved areas nationwide to address it.

In 2019, the Federal Communications Commission (FCC) created a $20.4 billion new Rural Digital Opportunity Fund (RDOF) to deploy broadband to eligible unserved and rural locations across the country. When the results of the Phase I RDOF auction were announced, nine companies had won bids to expand broadband access to 155,137 locations across the state of North Carolina — nearly all of the 158,805 eligible locations identified across the state.

This very welcome news also presents a challenge for North Carolina policymakers seeking to deploy broadband access in those areas quickly. Labor, materials, and investment capital for expanding broadband deployment will be in high demand, and given the FCC's six-year window for project completions, states will be competing with each other for broadband workers and material. They will flow to states where their use promises to be the most efficient and cost-effective, and that will depend upon states having the right policies in place to ensure timely builds and relative certainty over costs.

North Carolina has received good marks for policy reforms in recent years, so North Carolina policymakers have gotten the state well positioned so far. Still, researchers have recommended state leaders turn their attention to broadband infrastructure to build on their past successes.

In this competition where time is of the essence, and where resources will flow to their most efficient and effective uses first, in what areas should North Carolina improve, and what steps should North Carolina take to pave the way for these resources?

This paper highlights the three most pressing issues impeding broadband infrastructure and deployment in North Carolina now, and they all concern utility pole attachments.

This paper recommends three reforms:

1. **COST SHARING.** When a pole attachment necessitates purchasing and installing a replacement pole, pole owners should share in the cost by having the new attaching entity responsible for the remaining net book value of the pole being replaced, not the full cost of purchasing and installing the new pole. This change would lower project costs perhaps dramatically, serve the public interest to encourage rather than discourage broadband expansion to unserved and rural areas, and be more just and reasonable than giving a windfall to the pole owner at great expense to an attaching entity.

2. **QUICK DECISIONS.** Require the North Carolina Utilities Commission (NCUC) to expedite disputes concerning pole attachments. It is in the public interest to promote rapid expansion of broadband service into unserved and rural areas, which would include an accelerated resolution to pole attachment disputes.

3. **CONSISTENT FORMULA.** Have all utility pole owners adhere to the same FCC cable rate formula for pole attachments, regardless of whether they are regulated by Section 224 of the Communications Act. It would create a much more uniform, predictable, and certain cost environment for pole attachments and broadband expansion projects — a result that would help speed broadband expansion.

These proposals would result in lowering costs to broadband providers, which would make state, federal, and private investment efforts to expand rural broadband much more efficient and allow their reach to extend much further and reach many more households and businesses. In so doing, they would help North Carolina's projects not only move to the front of the line in the national competition for broadband workers, capital, and investment, but they also would set up North Carolina as a national model for efficient and quick deployment of private and public resources used to support broadband infrastructure.

INTRODUCTION

A CLEAR AND PRESSING ITEM OF PUBLIC INTEREST

Recognizing the growing importance of high-speed broadband in society but also the challenge of bringing broadband access into the rural parts of the state, North Carolina policymakers have made good progress in recent years to help providers close gaps in service. The gaps are real, and the challenge is great. Because of the economic costs of expanding broadband facilities into far-flung rural areas with fewer potential end users, residents have fewer providers, fewer choices, and less access to high speeds — and in some places, none at all. The Federal Communications Commission (FCC) recently identified 158,805 unserved locations across North Carolina. [1]

Amid the COVID-19 pandemic, however, government directives and people's choices sped up North Carolinians' reliance on high-speed broadband, with people opting to work from home, school instruction going remote, and more patients avoiding doctors' office visits through telemedicine. At the same time, this greater reliance on broadband heightened worries that people, patients, and students in unserved rural areas across North Carolina could get left further behind.

"North Carolina policymakers have been actively working to address rural broadband and connectivity needs in various ways."

With meeting this need so clearly in the public interest, private investors and federal and state governments are all directing money and resources into unserved areas nationwide to address it. North Carolina policymakers have been actively working to address rural broadband and connectivity needs in various ways.

In 2018, the General Assembly created the Growing Rural Economies with Access to Technology (GREAT) program. The program awards grants to eligible broadband service providers proposing to extend service to unserved areas in economically distressed counties. Successful grant applicants must score highly on criteria, including the use of partnerships to lower cost and speed deployment, locating in areas with more unserved households and businesses, keeping deployment costs to consumers low, providing faster connection speeds, and also providing matching funds.[2] In February 2021, owing to pandemic-related needs, the General Assembly appropriated $39 million into the GREAT program.[3]

The General Assembly made several reforms to land-use regulations in 2019, including statutory changes to promote and further the provision of mobile broadband and wireless telecommunications services. The law encouraged the collocation of wireless support structures and set time and fee limits on their permitting by local governments. It also placed strict limits on how cities can regulate the collocation of small wireless facilities. It furthermore forbid cities from entering into exclusive arrangements "for use of city rights-of-way for the construction, operation, marketing, or maintenance of wireless facilities or wireless support structures or the collocation of small wireless facilities," which include utility poles, conduit, cable, and related facilities. [4]

Also in 2019, the legislature removed impediments in state law that would have prevented electric membership corporations from participating in

the federal ReConnect Program, a $600 million loan and grant program launched in 2018 under the U.S. Department of Agriculture to help facilitate broadband deployment in unserved and rural areas and attract private investment to providing broadband infrastructure in those areas.[5] The North Carolina law allowed electric membership corporations to apply for federal grant funding to install broadband infrastructure along their easements and rights-of-way in order "to connect rural areas that currently have insufficient broadband service." [6]

"...the only provider to win bids was Wilkes Telephone Membership Corporation, which was given nearly $68,000 to connect 368 locations."

In November 2020, in response to a 2019 directive from Gov. Roy Cooper,[7] the North Carolina Department of Transportation (DOT) and the North Carolina Department of Information Technology finalized a state "Dig Once Policy" to expand high-speed broadband access during state road projects. The policy seeks to "reduce the costs of trenching or installation by multiple providers and broadband infrastructure to aid in the expansion of broadband access." It would accomplish cost reduction by giving any interested broadband provider notice of a "joint-trench opportunity" whenever an internet service provider (ISP) notifies the DOT that they intend to use conventional open-trench construction to build new or relocate existing facilities within the limits of a state highway. The ISP would advertise this opportunity for at least two weeks, and any interested other broadband provider could join in. [8]

The federal government is devoting a significant amount of financial resources to further broadband deployment in unserved and rural areas. For example, in 2018 the FCC allocated $1.49 billion in Connect America Fund (CAF) Phase II funds in a reverse auction to 103 bidders in 45 states to bring fixed broadband and voice services to over 700,000 eligible (high-cost and unserved) locations in 45 states. For North Carolina, however, the only provider to win bids was Wilkes Telephone Membership

Corporation, which was given nearly $68,000 to connect 368 locations.[9]

Among the features of the Coronavirus Aid, Relief, and Economic Security (CARES) Act of 2020 is the $150 billion Coronavirus Relief Fund (CRF) to states for unanticipated, pandemic-related expenses. States could use these funds for expanding broadband access, owing to emergency needs for more access, especially in rural and unserved areas for remote learning and telehealth.[10]

In 2019, the FCC announced a $20.4 billion new Rural Digital Opportunity Fund (RDOF), built on the CAF Phase II model, to deploy broadband to eligible rural locations with an estimated six million homes and businesses. The RDOF prioritizes bidders pledging higher speeds, greater usage allowances, and lower latency. It also puts RDOF recipients on the clock to provide service to 40 percent of promised locations in three years, increasing buildout commitments by 20 percent increments over the subsequent three years (i.e., 100% buildout requirement by year six) or issue revisions. [11]

When the results of the Phase I RDOF auction were announced, *nine companies had winning bids* to expand broadband access to 155,137 locations across the state of North Carolina (out of 158,805). The total assigned support was $166.58 million for 10 years. Importantly for North Carolina, the affected unserved and rural locations are in nearly every county in the state (see Table 1).

Table 1: Rural Digital Opportunity Funds Phase I Winning Locations, by County and Assigned Support[12]

County	Locations	Assigned Support (10 years)
Alamance	735	$501,121.20
Alexander	2,136	$1,587,445.10
Alleghany	92	$137,832.00
Anson	1,053	$3,329,332.40
Ashe	44	$105,872.00
Avery	394	$656,725.30
Beaufort	1,780	$283,921.40

Table 1: Rural Digital Opportunity Funds Phase I Winning Locations, by County and Assigned Support (continued)

County	Locations	Assigned Support (10 years)
Bertie	1,518	$2,154,238.50
Bladen	705	$859,660.40
Brunswick	194	$401,012.70
Buncombe	1,472	$2,789,582.40
Burke	978	$1,918,461.10
Cabarrus	231	$229,370.00
Caldwell	1,188	$2,487,542.80
Camden	55	$20,663.70
Carteretl	32	$53,080.50
Caswell	4,393	$3,267,745.20
Catawba	194	$138,638.00
Chatham	3,725	$2,474,768.40
Cherokee	3,229	$2,864,363.40
Chowan	499	$191,520.10
Clay	1,587	$1,459,610.30
Cleveland	2,128	$2,460,273.00
Columbus	1,125	$1,372,684.00
Craven	1,830	$2,133,178.40
Cumberland	624	$919,603.20
Currituck	1,187	$230,202.20
Dare	106	$408,204.40
Davidson	272	$334,488.30
Duplin	7,241	$7,654,012.60
Durham	537	$242,629.40
Edgecombe	1,810	$3,431,377.80
Forsyth	32	$58,506.80
Franklin	2,627	$1,617,019.70
Gaston	101	$69,399.40
Gates	1,864	$2,591,866.90
Graham	2,333	$3,380,292.80
Granville	2,818	$340,914.30
Greene	2,720	$2,381,628.40

Table 1: Rural Digital Opportunity Funds Phase I Winning Locations, by County and Assigned Support (continued)

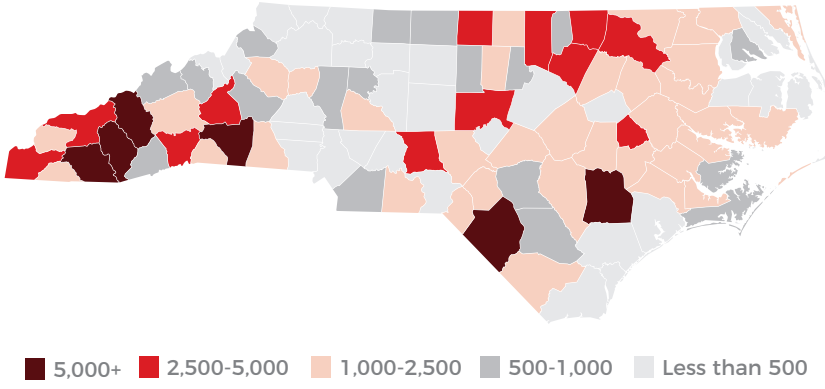
County	Locations	Assigned Support (10 years)
Guilford	349	$142,322.99
Halifax	3,593	$3,986,896.10
Harnett	1,585	$1,146,542.40
Haywood	5,703	$7,638,312.90
Henderson	3,511	$3,657,221.10
Hertford	1,440	$1,575,827.90
Hoke	1,017	$1,435,964.20
Hyde	1,817	$90,199.80
Iredell	777	$575,766.30
Jackson	11,160	$16,994,261.20
Johnston	2,270	$2,091,586.60
Jones	1,586	$3,874,866.00
Lee	176	$157,683.90
Lenoir	1,716	$1,678,506.00
Lincoln	379	$270,753.00
Macon	8,191	$9,009,136.30
Martin	2,285	$3,843,011.00
McDowell	2,986	$3,453,030.90
Mecklenburg	14	$12,041.70
Mitchell	404	$346,816.10
Montgomery	3,136	$2,214,716.50
Moore	2,412	$1,881,871.10
Nash	1,831	$1,600,285.30
New Hanover	84	$161,370.00
Northampton	1,652	$693,116.40
Onslow	291	$506,319.80
Orange	1,795	$297,021.50
Pamlico	824	$887,247.40
Pasquotank	20	$44,964.70
Pender	97	$164,935.70
Perquimans	505	$683,512.00
Person	1,161	$160,944.50

Table 1: Rural Digital Opportunity Funds Phase I Winning Locations, by County and Assigned Support (continued)

County	Locations	Assigned Support (10 years)
Pitt	2,135	$3,012,965.20
Polk	1,530	$1,289,950.40
Randolph	409	$183,230.01
Richmond	468	$627,288.20
Robeson	5,715	$5,702,070.30
Rockingham	847	$931,228.40
Rowan	1,044	$894,188.20
Rutherford	5,897	$7,053,643.00
Sampson	2,455	$2,289,127.00
Scotland	1,036	$1,573,294.30
Stanly	401	$278,565.70
Stokes	540	$808,914.20
Surry	170	$195,670.50
Swain	3,413	$5,297,362.50
Tyrrell	480	$1,912,976.70
Union	668	$775,137.40
Vance	703	$302,106.50
Wake	363	$281,124.20
Warren	2,719	$724,619.00
Washington	478	$773,441.80
Watauga	567	$369,677.90
Wayne	1,533	$990,139.10
Wilkes	197	$237,724.00
Wilson	400	$640,387.00
Yadkin	78	$61,570.70
Yancey	535	$558,199.70
North Carolina Total	**155,137**	**$166,580,441.70**

SOURCE: FEDERAL COMMUNICATIONS COMMISSION

Rural Digital Opportunity Fund Locations by County



SOURCE: FEDERAL COMMUNICATIONS COMMISSION

OPPORTUNITY AND A CHALLENGE TO ACT

Such a massive endeavor nationwide may be good news for unserved and rural areas in general, but it also represents a challenge for North Carolina policymakers seeking to deploy broadband access in those areas here. Labor, materials, and investment capital for expanding broadband deployment will be in high demand, and given the FCC's six-year window for project completion, North Carolina should make every effort to ensure that resources used to deploy broadband in the state encounter as few regulatory and marketplace barriers as possible. Such barriers will only jeopardize the ability of providers to accomplish their builds into unserved areas in a timely and cost-efficient manner. Delay and avoidable cost increases will directly impact end-user consumers and businesses who desperately need broadband service.

Choices by North Carolina leaders in recent years have the state relatively well-positioned to bridge the rural broadband gap. Over 95 percent of North Carolina has at least three providers of 25/3 megabits per second speed, according to the most recent FCC data, while the rest

had two providers. But at higher speeds (100/10 mbps or more), 6.4 percent lacked any provider, and although over 93 percent had access to at least one provider of higher speeds, for about half of them, they had only one choice. [13]

In the R Street Institute's *2020 Broadband Scorecard Report* for the states, North Carolina was given a B+ grade. The scorecard ranks states on a broad range of laws concerning broadband deployment, including right-of-way access, zoning to construction permits, franchising, etc. On the raw score, North Carolina was tied for 16th among the states — edging closer to the middle of the pack.[14] R Street recommends that North Carolina broadband policy focus on "the deployment of wireline infrastructure to balance out the great work the state has done on wireless."[15]

In this competition where time is of the essence, and where resources will flow to their most efficient and effective uses first, in what areas should North Carolina improve? What steps can policymakers take to clear the way for a timely and cost-efficient deployment of broadband infrastructure in unserved areas of the state?

The Need for a Uniform Policy and Lower Costs of Utility Pole Attachments

The most pressing issues in North Carolina impeding broadband infrastructure and deployment now are issues regarding utility pole attachments. They relate to the one-time, "make-ready" charges for attaching broadband facilities, including especially replacing the pole; the time it takes to resolve disputes over pole attachments; and also the annual rates charged for utility pole attachments. These issues contribute a great deal of uncertainty over the total project costs as well as potential delays.

Lower costs and less administrative delays for pole attachments and less uncertainty about rates would promote broadband deployment in an area. Higher costs and more delays, by contrast, would impede deployment or cause resources to go elsewhere — a result that would only harm

consumers by keeping them from being able to take full advantage of the service. The FCC recognized that "higher pole attachment rates would ultimately be recovered from consumers, and could lead some consumers to cut back or even discontinue their service."[16] North Carolina policymakers would find it imperative to resolve such matters, given the obvious public interest in expanding high-speed broadband into rural and unserved areas quickly.

"Various attaching entities that share space on the pole should bear their fair share of these costs."

Why are utility pole attachments such a big infrastructure challenge in connecting rural homes and businesses to high-speed broadband? Few alternatives exist for broadband providers to expand their reach. Burying cable underground can be prohibitively expensive.[17] The inescapable importance of utility pole attachments to broadband facilities means that the utilities that own those poles wield considerable monopoly power.[18]

To be sure, the utility pole owners face several costs: the physical poles themselves; the labor and materials for installing the poles, which are variable costs depending upon the location and topography of the pole site; maintenance costs, including trimming vegetation and storm preparation and cleanup; administrative costs; taxes; and depreciation.[19] Various attaching entities that share space on the pole should bear their fair share of these costs.

In urban areas, a single pole attachment can serve several homes or businesses. By contrast, houses and businesses are spread out in unincorporated areas and farming communities. The rural broadband advocacy alliance ConnectTheFuture.com estimates that although a single pole in an urban setting can provide broadband for 10 homes, in a rural setting 10 poles could be required to bring broadband to a single home.[20] Citing data from the National Rural Electric Cooperative Association, the *Atlanta Journal-Constitution* reported that cooperatives "use 12 to 18 poles per mile in a typical rural county, serving an average of 10

customers per mile."[21] More attachments and fewer customers per mile create a sizeable urban/rural cost disparity.

For the investor-owned utilities (IOs, which in North Carolina are Duke Energy Carolinas, Duke Energy Progress, and Dominion Energy), pole attachment rates are governed by the FCC under the authority given to the commission by Section 224 of the Communications Act. Per Section 224, FCC rulemaking must ensure that pole attachment rates are just and reasonable. For attaching to a utility pole, the pole owner is allowed to recoup 100 percent of the make-ready costs. For the maximum annual rental rate, the FCC utilizes a formula (known as the cable rate formula) that accounts for how much of the pole's usable space the new attachment will occupy, the net cost of the bare pole, and the carrying charge rate (which account for "administrative costs, maintenance, depreciation, taxes and a rate of return"). Importantly, in 1987 the U.S. Supreme Court upheld the FCC's cable rate formula as fully compensatory to pole owners and held that the idea it was confiscatory could not be "seriously argued."[22] The formula has also been supported by other courts and agency decisions.

Of particular interest here regarding the FCC's cable rate formula is that, in addition to providing for a just, reasonable, and fully compensatory methodology for setting rental rates, it is also uniform and consistent. Given the urgency to attract labor, materials, and investment into North Carolina for immediate rural broadband expansion, having a uniform and consistent rate-setting methodology for pole attachments would help tremendously by removing a great deal of uncertainty in estimating project costs.

Nevertheless, electric membership cooperatives (EMCs) and municipal utilities (munis) are exempt from Section 224 and therefore not subject to the FCC's cable rate formula. At the time Congress passed the Pole Attachment Act of 1978, which added Section 224, EMCs and munis were charging the lowest pole attachment rates. Congress exempted EMCs and munis on the rather naive assumption those lower rates would persist even as they changed the regulatory environment facing IOs.

Nevertheless, lacking tighter regulatory control over rates and having monopoly power over utility poles incentivized EMCs and munis to inch upward toward monopoly rents, causing attaching entities to bear greater and greater shares of the pole costs.[23]

"...having a uniform and consistent rate-setting methodology for pole attachments would help tremendously by removing a great deal of uncertainty in estimating project costs."

For munis and EMCs, exempt from FCC regulation under Section 224, North Carolina law requires that they "shall allow" utilizations of their poles, ducts, and conduits by "any communications service provider" (which includes broadband providers), and that the negotiated "rates, terms, and conditions" must be "just, reasonable, and nondiscriminatory." The only reason for which a pole utilization request could legally be denied would be if there are capacity or safety limitations that "cannot be remedied by rearranging, expanding, or otherwise reengineering the facilities." Should those remedies be needed, state law requires that the attaching entity reimburse "the reasonable and actual cost" to the muni or EMC.[24]

A plain reading of the statute reveals a strong desire by the legislature in favor of connecting communications services and in favor of pole owners charging them just, reasonable, accurate, and nondiscriminatory rates.

According to a 2019 white paper underwritten by the Internet & Television Association (NCTA), EMCs in North Carolina charged pole attachment rates that were over one and a half times higher on average than what investor-owned utilities charged (EMCs' rates were 53 percent higher on average). Municipal utilities' rates were, on average, slightly lower than IOs' (15 percent less). There was much greater variance in the pole attachment rates charged by North Carolina EMCs and munis than by IOs, however, and while their minimum rates were significantly lower,

Table 2: Average NC Pole Attachment Rates and Variance, By Pole Owner, 2017[26]

Pole Owner	Average Rate	Standard Deviation	Minimum Rate	Maximum Rate	Avg. Rate vs. IO Avg.	Min. Rate vs. IO Min.	Max. Rate vs. IO Max.
Investor-Owned (IOs)	7.07	3.48	1.31	17.28	—	—	—
EMCs	10.82	6.74	1.05	29.19	53% more	20% less	69% more
Municipal	6.02	4.84	0.30	22.00	15% less	23% less	27% more

NOTE: THE GREATER VARIANCE IN UTILITY POLE ATTACHMENT RATES FROM EMCS AND MUNIS ADDS UNCERTAINTY TO PROJECT COST ESTIMATES. AS DISCUSSED ABOVE, PROVIDING PREDICTABILITY AND UNIFORMITY IN RATES WOULD ATTRACT RESOURCES TO NORTH CAROLINA EARLIER IN THIS NATIONWIDE ENDEAVOR BY RAISING EXPECTATIONS FOR GREATER EFFICIENCY AND EFFECTIVE DEPLOYMENT.

SOURCE: MICHELLE CONNOLLY, THE ECONOMIC IMPACT OF SECTION 224 EXEMPTION OF MUNICIPAL AND COOPERATIVE POLES, JULY 12, 2019

the maximum rates for EMCs and munis were significantly higher than the maximum rate for IOs (see Table 2). Also, these disparities were observed even when regulated and unregulated pole owners were in the same geographic settings.[25]

Pole Replacement, Dispute Resolution, and Uniform Pole Attachment Rates

Cost Sharing

Regarding make-ready costs, a significant expense for attaching entities is pole-replacement costs. If the pole owner determines that adding a new facility to the pole would first require replacing the pole, often the attaching entity — which must pay 100 percent of the make-ready costs — is required by the pole owner to pick up the entire tab of the new pole. This allocation of costs seems unfair and results in a windfall to pole owners, who not only get a whole new pole replaced for them, but they

get to collect pole attachment fees for that pole in perpetuity, including from the attacher who just paid for the owner's new pole.

Pole replacement costs alone can be a significant cost driver for broadband expansion projects, and one that is hard to anticipate fully. For example, in a petition to the FCC on July 16, 2020, the NCTA cited a rural broadband expansion project in which the pole-replacement costs by themselves represented a quarter of the entire project's cost:

> *In a major expansion to over 57,000 rural homes and small businesses, pole replacement costs alone have accounted for approximately* ***25 percent of the total costs*** *of construction (including applications, surveys, permitting, labor, and material).*[27] *[Emphasis in original.]*

Given the public interest in rapidly expanding high-speed broadband service, the state should require and affirm a just and reasonable standard. Make-ready costs fronted by the attaching entity should be those expenses that, as suggested by the phrase, *make the pole ready* to receive their facilities. The pole owner should be made whole; that is, the pole owner should not be rendered worse off after the attachment. At the same time, however, the pole owner should not expect windfall benefits from the attachment at the expense of the attaching entity.

It would be just and reasonable to have the attaching entity be responsible for the work of making the attachment, the incremental costs of the attachment (costs that the pole owner would not otherwise incur "but for" the new attachment), and a proportionate share of future pole maintenance, administration, and capital costs. The question is over when the incremental, "but for" costs of an attachment hastens the need to retire a pole so that replacement is required. Is it just and reasonable to make the attaching entity *fully* responsible for the entire cost of the pole replacement? What if the new pole is bigger, better, and more aligned with safety regulations?

The ability to cause a new attaching entity to bear the full cost of replacing poles creates incentives that are counter to what is just and

reasonable and also contrary to the public interest. It can give pole owners reason to defer maintenance, safety enhancements, and pole retirements in the hopes that they can be done at the expense of a new attaching entity.

Those temptations notwithstanding, given the lengthy lifespan of a utility pole, an attachment that speeds the necessity of retiring an aged pole will result in a new one offering greater benefits to the pole owner. Those include, as discussed in an NCTA petition to the FCC:

> *"the operational benefits of the replacement pole (i.e., additional height, strength and resiliency) and the ability to meet [the utility's] own regulatory mandates;*
>
> *the ability to offer additional service offerings and enhancements of its own (e.g., smart grid) as well as broadband in competition with the attacher;*
>
> *the sole benefit of enhanced rental opportunities from the increased capacity on the new replacement pole;*
>
> *the cost savings of any future planned upgrade for its own use and purposes, as it no longer has to incur the expense associated with any future scheduled cyclical replacement of the pole in the normal and routine course of providing for its own electrical distribution service;*
>
> *lower maintenance expenses associated with the new replacement pole;*
>
> *the ability to earn its authorized return on the enhanced rate base assets, and enjoy tax savings from the accelerated depreciation of a new capital asset which reverse as the asset ages."* [28]

For these concerns, the NCTA petitioned the FCC to declare that, when an attachment necessitates purchasing and installing a replacement pole, the appropriate costs to allocate to the new attaching entity should be "the remaining net book value of the pole being replaced." This cost can be calculated using FCC's pole attachment rate formula as a proxy for the value of the pole being replaced. [29]

This proposal would result in lowering costs to attaching entities such as broadband providers, which would make state, federal, and private investment efforts to expand rural broadband much more efficient and allow their reach to extend much further. It would also bring clarity, predictability, and certainty into estimating the costs of such projects, because they would be based on publicly available utility cost data. That plus being based on a reliable formula that's been upheld in the courts and agency decisions should limit disputes between pole owners and attaching entities. While the FCC acted on the NCTA Petition in part, it has referred additional consideration of specific pole replacement issues to a future proceeding. [30]

Such a proposal for fair cost allocation for pole replacement is also not unique or novel. The State of Maine includes a consideration of the net book value of replaced utility poles. Under its law, in situations in which "an existing or a proposed attaching entity requires additional space which is not available on that joint-use utility pole, and the joint-use utility pole must be replaced by a taller joint-use utility pole," Maine law states that,

> *the existing or proposed attaching entity causing the need for replacement shall pay for (i) the difference between the cost for the taller joint-use utility pole and supporting equipment such as guys and anchors and the cost for a new 35-foot joint-use utility pole and supporting equipment in the same location, plus (ii) a reasonable estimate of the net book value of the joint-use utility pole and supporting equipment, if any, which has been replaced.* [31]

The NCTA considers the Maine law "a generally sensible model that better comports with an equitable and proportionate allocation of costs than does the common practice of indiscriminately transferring them to new attachers in their entirety, and is consistent with the goals of promoting continued broadband deployment to unserved areas." [32]

Quick Decisions

Another change would help rapidly resolve disagreements that may arise between pole owners and attachers by having the Utilities Commission expedite disputes arising over pole attachments.

State law governing the regulation of pole attachments places time windows on several matters, such as negotiating an agreement (90 days), bringing noncompliant lines, equipment, or attachments into compliance (60 days), and even reimbursing a utility for bringing noncompliant lines, equipment, or attachments into compliance (45 days). G.S. § 62-350(c) declares that the NCUC "shall adjudicate disputes arising under this section on a case-by-case basis." Part of the law's charge to the NCUC is to "resolve any dispute identified in the filings consistent with the public interest." [33]

The General Assembly should amend the law to declare it in the public interest to promote rapid expansion of broadband service into unserved and rural areas, and to that end place time windows on the NCUC to adjudicate disputes arising over pole attachments in unserved and rural areas (which could be defined either by census tract, country distress rankings [34] provided by the North Carolina Commerce Department, or broadly at the NCUC's discretion). If 90 days is an acceptable time frame in which to reach an agreement, then perhaps the same urgency should be used to adjudicate a dispute that arises.

Consistent Formula

In North Carolina, there are three IOs regulated by Section 224, and they cover the entire state. There are also 31 EMCs and 75 municipal and university-owned electricity distribution systems over which the North Carolina Utilities Commission has limited jurisdiction, but it includes adjudicating pole attachment disputes. [35] Prior to a 2015 change in the state law concerning the regulation of utility pole attachments, those disputes were held in state Business Court. [36]

So although the state's large numbers of munis and EMCs are predominantly in unserved areas, their poles exist in the same locations as IOs'. The NCUC noted in 2017 that poles owned by EMCs and IOs were not only virtually identical but, owing to joint use agreements, "in almost all situations, there is only one set of poles on any particular road."[37] Poles adjacent to each other could be under two completely different regulatory statuses. For estimating the costs of expanding services, this situation creates difficulty and uncertainty.

"If the NCUC held all pole owners to the same FCC cable rate formula, it would create a much more uniform, predictable, and certain cost environment for pole attachments and broadband expansion projects."

If the NCUC held all pole owners to the same FCC cable rate formula, it would create a much more uniform, predictable, and certain cost environment for pole attachments and broadband expansion projects. This uniform policy would have the added advantage of being recognized and upheld as fair and fully compensatory. It would also create a lower cost environment overall with lower variance, and it would prevent arbitrary, inordinately high price increases after attachments are made, when an unregulated pole owner has great leverage over the attaching entity. [38]

Such a proposal would not be far-fetched. In a case regarding whether an EMC's pole attachment rates were just and reasonable, *Rutherford Electric Membership Corporation v. Time Warner Entertainment-Advance/Newhouse Partnership*, the Business Court rejected Rutherford Electric Membership Corporation rates, and in so doing found that the FCC cable rate formula "provides an economically justified means of reasonably allocating costs" and "promotes uniformity in pole attachment rates across the state." [39] The court reiterated this position in a case concerning pole attachment rates by a municipal utility, *Time Warner*

Entertainment/Advance-Newhouse Partnership v. Town of Landis: "As in Rutherford, the facts presented in this case demonstrate that the FCC Cable Rate provides a reasonable means of allocating costs without creating a subsidy from the pole owner to the attacher." [40]

Even while not presumptively adopting the FCC cable rate formula, the court in *Rutherford* found that:

> *it is appropriate to consider the rates yielded by the FCC Cable Rate formula in determining whether [Rutherford's] rates are just and reasonable. Not only is the Court directed to do so by § 62–350, but, by applying the facts presented in this case to an analytical structure [i.e., the cable rate formula] that is* ***well-understood, widely used, and judicially sanctioned,*** *the Court is assured that it is not exceeding its judicial function. Moreover, the Court expects that reliance on established FCC precedent will, as the General Assembly intended, provide helpful guidance to parties involved in future negotiations over just and reasonable pole attachment rates, terms, and conditions.* [41] *[Emphasis added].*

With respect to how reliance on established FCC precedent will provide helpful guidance, "as the General Assembly intended," the comment refers to how the same state law concerning the regulation of pole attachments (G.S. § 62-350) before 2015 included "a specific reference to a section of the federal Communications Act that provides guidance to the FCC for regulation of rates, terms, and conditions for pole attachments between entities that are subject to that federal law, in the reference to the types of factors or evidence the parties may present in resolving a dispute." [42]

The fact that the legislature and the judiciary in North Carolina both considered the cable rate formula compelling for determining whether pole attachment rates are just, reasonable, and in the public interest attests to its usefulness in general, but especially given the present need for making the most out of sizeable government spending for broadband expansion into unserved and rural areas.

CONCLUSION AND RECOMMENDATIONS

The COVID-19 pandemic has accelerated North Carolinians' reliance on high-speed broadband, and in so doing, it has highlighted remaining gaps in broadband service in areas that have yet to be served. In response, the private and government sectors are marshaling tremendous resources to bring broadband service to those last, far-flung places across the nation, including in North Carolina. The FCC's recently concluded Phase I RDOF auction included a total of nine companies winning bids to expand broadband access to over 155,000 unserved and rural locations in nearly every county in North Carolina, with a total assigned support of $166.58 million for 10 years.

This nationwide effort represents a great opportunity but also a challenge for North Carolina policymakers. Policymakers should look to ensure that the flow of resources into the state is not impeded or delayed. Every dollar invested and every hour of labor worked should go to broadband deployment, not redirected towards the wrong places, given as

windfall benefits to utilities, or wasted or bogged down in bureaucratic delays. Failure to do so will be a once-in-a-lifetime opportunity missed.

Thanks to wise choices by North Carolina leaders in recent years, the state is relatively well-positioned. Now the most pressing issues in North Carolina regarding broadband infrastructure and deployment are issues regarding utility pole attachments and pole replacements. To address those, this paper proposes the following reforms:

1. **COST SHARING.** When a pole attachment necessitates purchasing and installing a replacement pole, pole owners should share in the cost by having the new attaching entity **responsible for the remaining net book value** of the pole being replaced, not the full cost of purchasing and installing the new pole. This change would lower project costs perhaps dramatically, serve the public interest to encourage rather than discourage broadband expansion to unserved and rural areas, and be more just and reasonable than giving a windfall to the pole owner at great expense to an attaching entity.

2. **QUICK DECISIONS.** Require the North Carolina Utilities Commission to **expedite disputes concerning pole attachments.** It is in the public interest to promote rapid expansion of broadband service into unserved and rural areas, which would include an accelerated resolution to pole attachment disputes.

3. **CONSISTENT FORMULA.** Have all utility pole owners **adhere to the same FCC cable rate formula** for pole attachments, regardless of whether they are regulated by Section 224. It would create a much more uniform, predictable, and certain cost environment for pole attachments and broadband expansion projects — a result that would help speed broadband expansion.

These proposals would result in lowering costs to broadband providers, which would make state, federal, and private investment efforts to expand rural broadband much more efficient and allow their reach to

extend much further. In so doing, they would help North Carolina's projects move to the front of the line in the national competition for broadband workers, capital, and investment. In this competition where time is of the essence, they address the areas of most immediate need for North Carolina.

Endnotes

1 Federal Communications Commission (FCC), Auction 904: Rural Digital Opportunity Fund, Final List of Eligible Areas — October 8, 2020, https://www.fcc.gov/auction/904.

2 Bill Patterson, "Senate Bill 99: Appropriations Act of 2018, Sec. 37.1: Growing Rural Economies with Access to Technology (GREAT) Program," Explanatory Memo, Legislative Analysis Division of the North Carolina General Assembly, August 14, 2018, https://dashboard.ncleg.gov/api/Services/BillSummary/2017/S99-SMTG-137(sl)-v-6.

3 "ICYMI: Senate Bill 36 Secures $39 Million in Funding for Private Broadband Development in Rural NC," NC Chamber, February 15, 2021, https://ncchamber.com/2021/02/15/icymi-senate-bill-36-secures-39-million-in-funding-for-private-broadband-development-in-rural-nc.

4 Session Law 2019-111, https://www.ncleg.gov/BillLookUp/2019/S355.

5 "ReConnect Loan and Grant Program: Program Overview," U.S. Department of Agriculture, https://www.usda.gov/reconnect/program-overview.

6 Session Law SL 2019-17, https://www.ncleg.gov/BillLookUp/2019/s310.

7 See Executive Order 91, North Carolina Office of the Governor, March 14, 2019, https://files.nc.gov/governor/documents/files/EO91_BROADBAND-TASK_FORCE_ON_CONNECTING_NC.pdf.

8 "Dig Once Policy," N.C. Department of Transportation, Division of Highways, November 2, 2020, https://connect.ncdot.gov/municipalities/Utilities/UtilitiesDocuments/NCDOT%20Dig%20Once%20Policy%20w%20Details%20Nov2020.pdf.

9 "Connect America Fund Phase II: Assignments Winning Bidders," Federal Communications Commission, https://auctiondata.fcc.gov/public/projects/auction903/reports/winning_bidders.

10 See discussion at "States Tap Federal CARES Act to Expand Broadband: Coronavirus relief funding supports access and infrastructure," Issue Brief, The Pew Charitable Trusts, November 16, 2020, https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2020/11/states-tap-federal-cares-act-to-expand-broadband.

11 "FCC Launches $20 Billion Rural Development Opportunity Fund," FCC, February 7, 2020, https://docs.fcc.gov/public/attachments/DOC-362190A1.pdf.

12 "Auction 904: Rural Digital Opportunity Fund: Results," FCC, https://www.fcc.gov/auction/904/round-results.

13 "Fixed Broadband Deployment: North Carolina," FCC, December 2019, https://broadbandmap.fcc.gov/#/area-summary?version=dec2019&type=state&geoid=37&tech=acfosw&speed=25_3&vlat=35.18286957083238&vlon=-79.86097000000001&vzoom=5.176884479291962; also see discussion in Jon Sanders, "Rural broadband expansion needs policymakers to clear the way for private enterprise," Research Brief, John Locke Foundation, February 2, 2021 https://www.johnlocke.org/update/rural-broadband-expansion-needs-policymakers-to-clear-the-way-for-private-enterprise.

14 Jeffrey Westling, "2020 Broadband Scorecard Report," R Street Institute, February 10, 2021, https://www.rstreet.org/2021/02/10/2020-broadband-scorecard-report.

15 Tom Struble and Jeffery Westling, "2019 Broadband Scorecard Report," R Street Institute, February 12, 2020, https://www.rstreet.org/2020/02/12/2019-broadband-scorecard-report.

16 Federal Communications Commission, Final Rule, "Pole Attachment Rates," 47 CFR 1, GN Docket No. 09-51, WC Docket No. 07-25, FCC 15-151, *Federal Register* 81, no. 22, February 3, 2016, pp. 5605-5618, https://www.federalregister.gov/d/2016-01182.

17 E.g., the NC Department of Information Technology's Broadband Office explained that having to "dig trenches or bore through soil to lay install conduit [is] an extremely expensive endeavor, especially in western North Carolina, where providers often must bore through granite to install fiber." "Dig-Once Policies," NC Department of Information Technology, Broadband Office, viewable at https://www.ncbroadband.gov/technical-assistance/playbook/policy-broadband/dig-once-policies.

18 Time Warner Cable Southeast LLC's Verified Complaint and Petition for Relief, Time Warner Cable Southeast LLC v. Jones-Oslow Elec. Mbrship. Corp. (N.C. Utilities Commission 2016) Docket No. EC-43, Sub 88, http://starw1.ncuc.net/NCUC/ViewFile.aspx?Id=48a3f918-25fe-43e3-8420-947bcee0055d.

19 Michelle Connolly, *The Economic Impact of Section 224 Exemption of Municipal and Cooperative Poles*, July 12, 2019, submitted by NCTA Re: Broadband Deployment Advisory Committee, GN Docket No. 17-83, Wireline Infrastructure, WC Docket No. 17-84, Wireless Infrastructure, WT Docket No. 17-79, Table 2 and Table A4, pp. 16 and 47, and also p. 27, https://www.ncta.com/sites/default/files/2019-07/NCTA%20Muni%20and%20Coop%20Poles%20Connolly%20Paper%20Ex%20Parte%20Filing%207-22-19.pdf, pp. 8-10.

20 "The Barriers," Connecting the Future, https://connectthefuture.com/the-barriers.

21 Mark Niesse, "Rural power companies would fund cable internet under Georgia bill," *The Atlanta Journal Constitution*, March 23, 2020, https://www.ajc.com/news/state--regional-govt--politics/rural-power-companies-would-fund-cable-internet-under-georgia-bill/4enKRK5wiTY88kgrj4BD7L/

22 Connolly, *The Economic Impact of Section 224 Exemption of Municipal and Cooperative Poles*, p. 7.

23 Time Warner Cable Southeast LLC's Verified Complaint and Petition for Relief; also see Connolly, The Economic Impact of Section 224 Exemption of Municipal and Cooperative Poles.

24 North Carolina General Statutes § 62-350, https://www.ncleg.gov/EnactedLegislation/Statutes/PDF/BySection/Chapter_62/GS_62-350.pdf.

25 Connolly, *The Economic Impact of Section 224 Exemption of Municipal and Cooperative Poles*, Table 2 and Table A4, pp. 16 and 47, and also p. 27.

26 Ibid.

27 NCTA Petition for Expedited Declaratory Ruling, In the Matter of Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment, (FCC, July 16, 2020), WC Docket No. 17-84, p. 6, viewable at https://www.ncta.com/sites/default/files/2020-07/071620_17-84_NCTA_Petition_for_Declaratory_Ruling.pdf.

28 Ibid., note 28, pp. 14–15.

29 Ibid., p. 11 and 23. As explained on p. 11, "NCTA proposes that the most efficient and economically appropriate way to measure this cost is to use the average depreciated bare pole investment derived using the Commission's pole attachment rate formula, which relies primarily on publicly available cost data and a presumed appurtenance deduction to remove non-pole related investment, such as cross-arms, booked to a utility's pole account in cases where actual appurtenance data is not available."

30 In a declaratory ruling released on January 19, 2021, the FCC "declined to act on the NCTA's Petition" out of the belief "it is more appropriate to address questions concerning the allocation of pole replacement costs within the context of a rulemaking, which provides the Commission with greater flexibility to tailor regulatory solutions." Nevertheless, the FCC issued the declaratory ruling to "clarify that it is unreasonable and inconsistent with section 224 of the Communications Act, the Commission's rules, and past precedent, for utilities to impose the entire cost of a pole replacement on a requesting attacher when the attacher is not the sole cause of the pole replacement." FCC, Declaratory Ruling, In the Matter of Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment, WC Docket No. 17-84, January 19, 2021, https://docs.fcc.gov/public/attachments/DA-21-78A1.pdf.

31 Maine Administrative Code, 65-407-880 Me. Code R. § 5, Section 407-880-5 — Separate Charges, viewable at https://casetext.com/regulation/maine-administrative-code/department-65-department-of-public-utilities-commission/division-407-public-utilities-commission/chapter-880-attachments-to-joint-use-utility-poles-determination-and-allocation-of-costs-procedure/section-407-880-5-separate-charges.

32 NCTA Petition for Expedited Declaratory Ruling, pp. 26–27.

33 N.C. G.S. § 62-350.

34 "County Distress Rankings (Tiers)," North Carolina Department of Commerce, https://www.nccommerce.com/grants-incentives/county-distress-rankings-tiers.

35 "North Carolina's Public Utility Infrastructure & Regulatory Climate," North Carolina Utilities Commission, January 2020, https://www.ncuc.net/documents/overview.pdf.

36 Session Law 2015-119, North Carolina General Assembly, https://www.ncleg.net/EnactedLegislation/SessionLaws/PDF/2015-2016/SL2015-119.pdf.

37 Connolly, *The Economic Impact of Section 224 Exemption of Municipal and Cooperative Poles*, p. 11.

38 Ibid., pp. 30–31.

39 Rutherford Elec. Mbrshp. Corp. v. Time Warner Entertainment-Advance/Newhouse P'ship, 771 S.E.2d 768 (N.C. App. 2015), viewable at https://caselaw.findlaw.com/nc-court-of-appeals/1696830.html.

40 Time Warner Entm't Advance/Newhouse P'ship v. Town of Landis, 747 S.E.2d 610 (NC. App. 2013), viewable at https://www.nccourts.gov/assets/documents/opinions/2014_NCBC_25.pdf.

41 Rutherford Elec. Mbrshp. Corp. v. Time Warner Entertainment-Advance/Newhouse P'ship.

42 Heather Fennell, (n. d.), "Senate Bill 88: Poll Attachment Disputes," Legislative Analysis Division, NC General Assembly, https://dashboard.ncleg.gov/api/Services/BillSummary/2015/S88-SMTD-82(sl).

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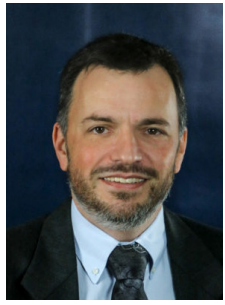

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