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FINANCIAL AND GOVERNANCE PROTECTIONS FOR ELECTRIC COOPERATIVES

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INTRODUCTION

At a time when many Americans cannot imagine life without access to high-speed internet, universal access to broadband has become a core policy issue for many who continue to live without it. The Federal Communications Commission (FCC), the U.S. Department of Agriculture (USDA) and other agencies have directed billions of dollars to broadband deployment in high-cost rural areas.[1] Yet despite subsidies authorized by the FCC of nearly $5 billion per year, many of these areas remain underserved.[2]

Frustrated at the lack of progress in some areas, state legislatures have swung into action. This year saw enactments of laws in Alabama, Colorado, Georgia, Maryland, Mississippi, North Carolina and Texas to allow certain electricity utilities to expand their services to include broadband.[3] Specifically, these new laws allow member-owned electric cooperatives (co-ops) to establish broadband affiliates using the balance sheet, personnel and brand equity of a monopoly electricity utility in order to push broadband out into their service territories. The laws also legislatively override previously established contract terms for easements, giving the co-ops that had previously bargained with landowners for access the unilateral and exclusive right to use their electricity easements for the additional siting of broadband equipment.

Using the financial integrity of an electricity utility to establish a broadband business—or, really, using the credit of its captive set of customers, who have no choice but to receive service from that utility, to that end—is a big bet. In fact, some co-ops studying the issue have found that it would mean mortgaging nearly the entire value of their electricity utility.[4] To help hedge such bets, the federal government is making available large tranches of subsidies for broadband provided by electric co-ops. For example, in a program largely targeted toward them, through its ReConnect Program, the USDA is making $600 million available in a combination of matching-

1. Most subsidies to rural broadband originate from the various "High-Cost Funds" first established by the FCC and originally targeted to supporting telephony. These are administered by the Universal Service Administrative Company. See "Funds," Universal Service Administrative Company, 2019. https://www.usac.org/hc/funds/default.aspx. However, the past decade has also seen efforts by the USDA and state governments to subsidize broadband deployment.

2. "2018 Annual Report," Universal Service Administrative Company, 2019, p. 5. https://www.usac.org/_res/documents/about/pdf/annual-reports/usac-annual-report-2018.pdf.

3. See Alabama Broadband Using Electric Easements Accessibility Act, H.B. 400, signed May 30, 2019. http://alisondb.legislature.state.al.us/ALISON/SearchableInstruments/2019RS/PrintFiles/HB400-enr.pdf; Colorado Act Concerning the Installation of Broadband Internet Service Infrastructure, S.B. 19-107, signed June 3, 2019. https://leg.colorado.gov/bills/sb19-107; Georgia, S.B. 2, signed April 26, 2019. https://legiscan.com/GA/bill/SB2/2019; Maryland Act Concerning Electric Cooperatives, S.B. 634, signed April 30, 2019. https://legiscan.com/MD/text/SB634/2019; Mississippi Broadband Enabling Act, H.B. 366, signed Jan. 30, 2019. http://billstatus.ls.state.ms.us/documents/2019/pdf/HB/0300-0399/HB0366SG.pdf; North Carolina, S.B. 310, signed May 30, 2019. https://www.ncleg.gov/BillLookUp/2019/S310; and Texas Act Relating to Broadband Service or Facilities Provided by an Electric Cooperative, S.B. 14, signed June 7, 2019. https://capitol.texas.gov/tlodocs/86R/billtext/pdf/SB00014F.pdf#navpanes=0.

4. John Ward and Ray Van Dusen, "Local EPAs vary with broadband feasibility studies," *Monroe Journal*, Aug. 8, 2019. https://www.djournal.com/monroe/news/local-epas-vary-with-broadband-feasibility-studies/article_73cd20b7-5acc-5edf-923b-1de9e4d48910.html.

fund grants and loans.[5] Meanwhile, the FCC has repurposed existing subsidy programs by exposing legacy telecommunications companies to competition for those subsidies. One such program, known as the Connect America Fund Phase II, awarded $1.49 billion in grants over a decade-long period through a 2018 auction.[6] Although not targeted specifically toward co-ops, a significant portion of the proceeds will flow to them as they, together with satellite providers, submitted the lowest-cost bids to serve unserved areas of the country. Still more substantially, in an August 2019 proposal for a "Rural Digital Opportunity Fund," the FCC is suggesting that nearly $20 billion in funds be repurposed to deploy broadband to unserved and underserved rural areas over a decade-long period.[7] Finally, while not intended to support commercial broadband, other government programs intended to support a "Smart Grid" in electricity networks could be misdirected or cross-applied to support broadband startups. Given the dollars and opportunity in play, it is no surprise that the provision of broadband by traditional electric co-ops has gone from being virtually a nonissue to becoming a major one—listed as one of the eight identified topics on the "issues and policy" heading of the website of the influential NRECA.[8] It is therefore crucially important that protections for electricity customers exist within both state legislative enactments permitting such moves and that provisions for appropriate accounting and governance protections are also ingrained within the cooperative business model itself.

Traditionally, co-ops have served sparsely populated rural areas in the United States—areas that major investor-owned utilities have regarded as unprofitable. Those investor-owned utilities are subject to rate regulation by state utility commissions, which ensures that the rates they charge customers are not "unjust," "unreasonable" or "unduly discriminatory."[9] Virtually every state has such legal requirements for investor-owned utilities. But such regulation is rarely applied to electricity utilities organized as co-ops, because their ownership model means that shareholders and customers are one in the same; they are all simply "members" of the co-op. To raise prices heedlessly or to provide an inadequate product would be self-defeating and thus co-ops' members meet annually to elect board members who are charged with balancing those countervailing interests. As such, the co-op's board effectively acts as its own regulator. In the United States, electric co-ops are the only example of a type of corporation that simultaneously enjoys a government-sanctioned monopoly over the provision of an essential service in a particular place but is not also subject to some form of government price regulation.

Extending any kind of unregulated monopoly, even a member-owned one, into another line of business can present complications. Electricity is a service adopted virtually everywhere it is available. And although there can be diverse ownership of electricity generators, there is usually only one deliverer of electricity to a particular home or business—in the instance of a co-op utility, this is the co-op itself. This is not the case for broadband. Even when broadband is deployed in a given area, a significant number of would-be users—especially older Americans—choose not to adopt it, either because they find it too costly or because they are simply not interested in broadband service.[10] And since electric co-ops serve mostly rural areas, where the population is on average both older and poorer than it is in suburban or urban areas, the tendency for would-be users in these areas to decline to adopt broadband amplifies the risk that the broadband network an electric co-op might establish will have substantially less-than-universal subscription.[11] At the same time, there are alternative deliverers of broadband, even in rural areas, including satellite and wireless service providers. While some users regard them as inferior, the evidence shows that many consumers choose to rely on them instead of faster but costlier alternatives.[12]

Herein lie three related problems that this policy study addresses, as well as their respective solutions:

1. Providing broadband in a quasi-competitive market where consumers may say "no" is a riskier financial proposition than delivering electricity as a monopoly. Co-ops should therefore think through and adopt governance protections to ensure the latter line of business is significantly insulated from the risks of the former.

2. Relatedly, when a business sells one product consumers must buy and offers another that it hopes they will buy, there is a strong incentive to cross-subsidize the competitive offering through the monopolized consumer base. Since these electricity/broadband co-ops will often tend to have a significant set of shared

5. "ReConnect Loan and Grant Program - Frequently Asked Questions," United States Department of Agriculture, updated May 21, 2019. https://www.usda.gov/reconnect/frequently-asked-questions.

6. A substantial sum of this money was awarded to co-ops. "FCC Connect America Fund Phase II Auction - Winning Bidder Summary," Federal Communications Commission, Aug. 28, 2018. https://docs.fcc.gov/public/attachments/DA-18-887A2.pdf.

7. FCC 19-77. https://docs.fcc.gov/public/attachments/FCC-19-77A1.pdf.

8. National Rural Electric Cooperative Association. https://www.electric.coop.

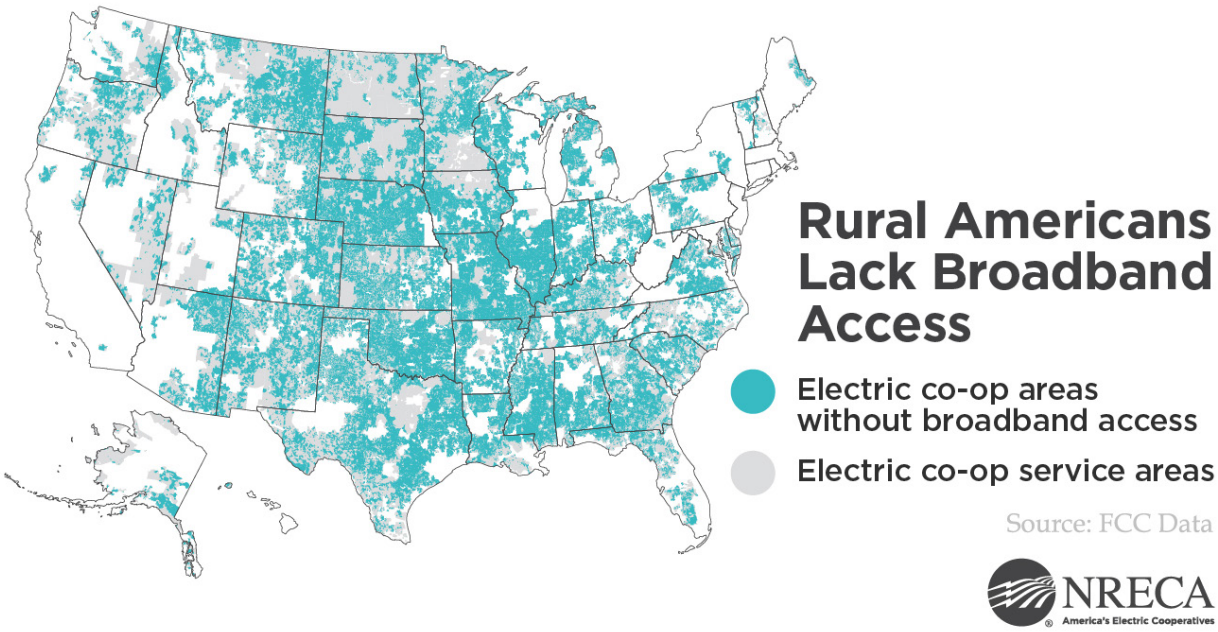
9. For an example of the classical formulation of this form of regulation in statute, see the analogous federal statute that governs the rate regulation of utilities when they do business in interstate commerce: 16 U.S.C. § 824(e). https://www.law.cornell.edu/uscode/text/16/824e.

10. "Barriers to Broadband Adoption: Cost is now a substantial challenge for many non-users," Pew Research Center, Dec. 21, 2015 https://www.pewinternet.org/2015/12/21/3-barriers-to-broadband-adoption-cost-is-now-a-substantial-challenge-for-many-non-users.

11. "Rural America at a Glance: 2018 Edition," U.S. Dept. of Agriculture, November 2018, pp. 5-6. https://www.ers.usda.gov/webdocs/publications/90556/eib-200.pdf.

12. "Internet/Broadband Fact Sheet," Pew Research Center, June 12, 2019. https://www.pewinternet.org/fact-sheet/internet-broadband.

IMAGE I: LACKING BROADBAND ACCESS ACROSS THE UNITED STATES



SOURCE: National Rural Electric Cooperative Association (based on FCC data).

resources, it is necessary to adopt clear accounting protections to ensure electricity consumers—especially the poorest among them, who may have no means to adopt broadband—are not subsidizing others' high-speed internet.

3. Finally, since the legitimate interests of the state and federal governments should be to boost broadband access to the greatest number of people at the lowest cost, it is necessary to ensure that there are not perverse consequences to promoting co-ops' broadband development in ways that could limit lower-cost or higher-access opportunities.

THE RISKS OF BEING A BROADBAND STARTUP

Providing telecommunications services, including high-speed broadband, to customers is a business with a significant measure of financial risk. A broadband network that costs too much will mean less subscriber adoption. Broadband offerings also have a history of being overcome by competition that was unforeseen when the initial business plan was formed. It once seemed to landline telephone companies that they were the only game in town and thus the natural players to dominate the provision of the emerging internet. Yet, as it happened, other wireline providers—such as cable companies—also came forward to provide the service. Now, a large number of Americans receive internet service from smartphones and hotspots enabled by wireless carriers. In fact, 20 percent of Americans in rural areas rely on a smartphone rather than home broadband for their internet needs, according.[13] Others receive service from fixed wireless internet service providers, or WISPs. Still others receive service via satellite, once a relatively marginal offering that targets rural America and has shown substantial growth rates in recent years.[14]

All of this suggests that an electricity utility, which usually faces no meaningful competition for the wires that constitute its medium of service, is not like a broadband business, which faces "intermodal competition" from wireline, wireless and satellite providers. Moreover, even those doing business in places that today have no competitive alternatives for broadband service need to consider the economics of making long-lived capital investments when the prospect of competition and technological change loom on the horizon. For example, while an electricity utility might comfortably make investments based on an expected multi-decade life span of the copper wire strung along its utility poles, it would be imprudent for a broadband business to make similar investment assumptions; the capital that a broadband startup plows into the ground today risks obsolescence within a shorter time horizon than that of an electricity utility. This means that a sound broadband business model must have higher prices

13. "Internet/Broadband Fact Sheet" (refer to tab "Who is smartphone dependent" sorted by "community https://www.pewinternet.org/fact-sheet/internet-broadband.

14. In a single year-on-year period from 2015 to 2016, the Census Bureau reports that U.S. households with satellite-based internet service increased from 6.2 to 7.7 percent. See "Computer and Internet Use in the United States: 2016," U.S. Census Bureau, 2018, p. 6. https://www.census.gov/content/dam/Census/library/publications/2018/acs/ACS-39.pdf.

earlier in time to ensure recovery of its investments. Yet, in turn, appropriate pricing in terms of investment recovery would mean fewer subscribers and the beginning of either a vicious cycle leading to the shuttering of the broadband outfit or its cross-subsidization by the electricity-utility business. These risks are among the reasons why Co-Bank, a prominent lender to electric co-ops, has recently urged caution about the business model. Rather than offering a more robust, wired broadband network, Co-Bank suggests that co-ops partner with existing telecommunications companies and using wireless mediums.[15]

These cautionary notes are not hypothetical; pre-existing utilities have a poor history of extending their businesses to include broadband. This is likely because, although the electricity and broadband businesses have superficial similarities, their cost structures, subscriber bases and competitiveness are profoundly different. For example, twenty years ago, it seemed natural that the Montana Power Company should deploy a fiber network and get ahead of the internet curve. After all, it had a pre-existing customer base and relationships with utility-line contractors; it knew how to obtain rights of way and how to keep local governments happy; and it could leverage the fiber-optic network to provide advanced metering service to electricity utilities. However, it was too much, too fast and the customer uptake that would have needed to occur to make the undertaking profitable did not materialize. And, in fact, the Montana Power Company's headfirst dive into the sector led to the century-old firm's bankruptcy and disintegration.[16]

A more recent history of local governments' broadband endeavors has had mixed, but mostly negative, results. The city government of Opelika, Alabama, for example, began a broadband company in 2013, promising to be a "gig city." It financed its undertaking using electricity utility operations as a backstop, securing funding with a lien against revenues from electricity customers. The project has been a disaster. Only one-third of the town's residents subscribes to the municipal service. Unable to fund itself, the service instead is forced to rely on subsidies from electricity consumers. Overall, the losses from the broadband program translated into a $1,140-per-household cost to the citizens of Opelika over a four-year period. By 2020, the electricity bills sent to Opelika's 11,000 households will have transferred a $19 million cross-subsidy to the town's broadband operations.[17]

A still more comprehensive study of municipal efforts surveyed 88 broadband companies. Only 20 of those reported the financial results of their broadband endeavors separately from the city's consolidated financials, making a meaningful assessment of the remainder difficult or impossible. Of the 20 for which information was available, 11 generated negative cash flow; they will likely be permanently dependent upon subsidies if they do not go out of business first—indeed, some already have. Another seven companies would need more than six decades to break even on a debt-cost basis alone. Only two generated sufficient revenue to pay back the network costs within three to four decades. And only a single network—that of Bristol, Tennessee, which does not use fiber but instead relies on DSL—has sufficient revenues to be considered a profitable concern.[18]

As co-ops have begun to explore the possibility of starting a broadband service, some are taking these considerations seriously. In the words of Barry Rowland, manager of Monroe County Electric Power Association in Mississippi, the decision to proceed on starting a broadband affiliate is a decision to "put our whole system up for collateral."[19]

A REVIEW OF STATE LAWS

Inadequate Protections for Electricity Consumers

Recently passed state laws that enable electric co-ops to enter the broadband business often fail to sufficiently address the risks of starting a broadband business. The Mississippi Broadband Enabling Act, which attracted some of the greatest fanfare and passed early in the state's 2019 legislative session, is a representative example of a law wherein the details are insufficient to protect consumers. While it prohibits the "use of its electric energy sales revenues to subsidize the provision [...] of broadband services to the public,"[20] the sentence that follows provides that: "an electric cooperative may, however, make capital investments in an affiliate, make loans to an affiliate at a fair market rate, and enter loan guarantees for the benefit of an affiliate, all of which may be in such amounts and on such terms as the electric cooperative's board of directors determines to be prudent and authorizes."[21]

15. "Recent Insights into Successful Broadband Partnerships," Co-Bank, August 2019. https://www.cobank.com/-/media/files/ked/communications/recent-insights-into-successful-broadband-partnerships-jul2019.pdf?la=en&hash=3F07BCB36E21A1A3335F79998DDB3BBC97BD9A90.

16. Steve Kroft, "Who Killed Montana Power?", *60 Minutes*, June 2, 2003. https://www.cbsnews.com/news/who-killed-montana-power-06-02-2003.

17. George Ford, "Financial Implications of Opelika's Municipal Broadband Network," *Phoenix Center Perspectives* No. 17-11 (Aug. 24, 2017). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3138859.

18. Christopher Yoo and Timothy Pfenninger, "Municipal Fiber in the United States: Empirical Assessment of Performance," University of Pennsylvania Law School Center for Technology, Innovation and Competition, 2017. https://www.law.upenn.edu/live/files/6611-report-municipal-fiber-in-the-united-states-an.

19. Ward and Van Dusen. https://www.djournal.com/monroe/news/local-epas-vary-with-broadband-feasibility-studies/article_73cd20b7-5acc-5edf-923b-1de9e4d48910.html.

20. Mississippi Broadband Enabling Act, § 3(6). http://billstatus.ls.state.ms.us/documents/2019/pdf/HB/0300-0399/HB0366SG.pdf.

21. Ibid.

A "capital investment" or a "loan guarantee" by an electric co-op that has no customer revenues other than those deriving from the sale of electricity suggests that this exception alone would be enough to eclipse the prohibition on cross-subsidization. As a practical matter, the Mississippi law offers no meaningful protection to electricity customers at all in this respect. Additionally, even if an electricity consumer were to believe that broadband was being illegally subsidized by electricity revenues, the Mississippi law provides no regulatory or judicial pathway to take issue with the practice. Hence, the law's ostensible prohibition on cross-subsidization can only be understood as a dead letter.

A similar statutory structure exists in neighboring Alabama's recently passed law, the Broadband Using Electric Easements Accessibility Act of 2019. It has a concrete advantage over Mississippi's law in that it not only prohibits cross-subsidies but contains a definition, albeit rather convoluted, of what constitutes one.[22] Yet, as in Mississippi, the Alabama law authorizes an extensive array of intercompany support. It opens the door for a situation in which a single board, sitting over both an electricity utility and its broadband affiliate, is approving "loans" on "such conditions as the board approves."[23] In such a situation, there is little practical difference between a permissible loan and an impermissible subsidy. Like in Mississippi, the Alabama law establishes no process for obtaining relief if a customer alleges illegal subsidization. There is no review by a third party and not even a requirement to have two different boards bargaining at arm's length. The cooperative board could simply defeat a claim of cross-subsidy by asserting that it was not a subsidy, but a loan. Meanwhile, the Alabama law does makes clear that, by contrast, investor-owned utilities who make loans to broadband affiliates are subject to a standard of "prudent and appropriate" review by a third party—the state's elected public service commission.[24] As a result, some electricity customers, but not others, receive the law's protection.

The main purpose of the Texas law, the 2019 legislative session's Senate Bill 14, is to retroactively change the terms of the easements that govern the installation of electricity utility infrastructure by co-ops in the state. Protections for electricity consumers who might cross-subsidize a co-op's broadband offerings feature only as an afterthought in the legislative drafting. In that respect S.B. 14, like the Mississippi and Alabama laws, pays lip service to the concept that "the rates charged for provision of electric service do not include any broadband service costs." Also like Mississippi and Alabama, the Texas law provides no independent oversight to ensure that this does not occur nor does it offer a pathway to remedy the situation if it does.[25] North Carolina and Maryland's statutes give similar short shrift to consumer protections that would guard against unfair cross-subsidies.

The Colorado and Georgia Statutes

Unlike the other states' laws, both the Colorado and Georgia ones contain far more substantial consumer protections. We focus on the Colorado law as a positive representative example of what an adequate structure for consumer protections entails, with the caution that much depends upon the implementation of these protections within co-ops, the courts and, in the case of Georgia, the state's utility regulator.

The Colorado law allows electric co-ops to provide broadband, but only through a "separate legal entity."[26] This requirement for a formal legal separation is the foundation of the law's requirement that co-ops keep separate books and records, and that they provide a clear accounting of the potential cross-subsidies, between the electric co-op and its broadband affiliate. The law correctly ties this concern about cross-subsidy to the fact that the electricity utility is a monopoly with a fixed customer base. The law requires that:

> As long as an electric utility maintains its exclusive right to provide electric service to customers within its exclusive service territory, both the electric utility that has a broadband affiliate and the broadband affiliate shall:
>
> (A) Maintain or cause to be maintained an accounting system for the broadband affiliate separate from the electric utility's accounting system, using generally accepted accounting principles or another reasonable and customary allocation method;
>
> (B) Cause a financial audit to be performed by an independent certified public accountant, within two years after commencement of commercial operation of retail commercial broadband service and at least once every two years thereafter, with respect to the broadband affiliate's provision of commercial broadband service, including an audit of the allocation of costs for property and services that are used in both the provision of commercial

22. "An electric provider providing broadband services shall fully allocate and properly account for all marginal costs, including the internal imputation of such costs when the electric provider does not provide broadband services through an affiliate, related to the provision of nonutility support services[…] and shall not use its electric services sales revenues for the subsidization of such nonutility support services." Alabama H.B. 400, § 37-16-9(a). http://alisondb.legislature.state.al.us/ALISON/SearchableInstruments/2019RS/PrintFiles/HB400-enr.pdf.

23. Ibid., § 37-16-9(b).

24. Ibid.

25. Texas S.B. 14, § 181.048(d).

26. Colorado S.B. 19-107, § 40-15-601(2).

broadband service and the electric utility's provision of electric service.[27]

The Colorado law also provides substantially more clarity than other state laws about what is permissible and impermissible conduct within the relationship between an electric co-op and its affiliate. Like the other laws, it prohibits the electric co-op from engaging in activities that "cross-subsidize" the broadband affiliate. However, it excels where other states' laws fail, because the Colorado law spells out more precise prohibitions on the conduct of an electric co-op that would qualify as cross-subsidization, including:

- below fair market value pricing;
- payment of capital or operating costs properly charged to the broadband affiliate under applicable accounting rules;
- use of any revenue from or subsidy for the provision of electric service to provide commercial broadband service below market value, except in connection with the electric utility's provision of electricity;
- loaning funds to a broadband affiliate if the interest rate on the loan is less than the electric utility's lowest cost of capital; and
- exchanging services or materials if the exchange is not of equivalent value.[28]

The Colorado restrictions are still not as protective of consumers as those adopted by the National Association of Regulatory Utility Commissioners, which are discussed in the next section of this paper. Nevertheless, the Colorado law provides a foundation from which to proceed with respect to electricity consumers' interests.

Of course, even reasonable people will disagree about whether a particular business practice constitutes a legally impermissible cross-subsidy. So the Colorado law provides for a clear avenue to adjudicate disputes—a provision that other states' laws do not include. Under the Colorado law, an electric co-op and its broadband affiliate must certify compliance with the law when requested to do so by another broadband company. If the latter is unsatisfied, the law provides an avenue for judicial challenge and for the discovery and admission of evidence concerning compliance with the prohibitions on cross-subsidization.[29] An enhancement to this law would be to allow complaints by consumers of electricity who feel the monopoly that serves them is unjustly cross-subsidizing a broadband affiliate.

27. Ibid., § 40-15-604(5).

28. Ibid., § 40-15-604(5)(c).

29. Ibid., § 40-15-604(6).

It is possible that courts of law are not the most appropriate forum in which to bring these challenges. Utility commissions already established in each state are probably better equipped to hear such technical concerns. Georgia's law, while providing fewer examples of impermissible cross-subsidies, does require a co-op to develop a "cost allocation manual" that is approved by the Georgia Public Service Commission, a five-member body to which members are elected in statewide contests.[30] In doing so, Georgia's law, together with Colorado's, provide a demonstrably greater measure of consumer protection than other state enactments in this field.

For co-ops in any state that decide to offer broadband service through an affiliate, they alone will still need to take into account important customer considerations. Namely, they will have to decide whether the risk of a broadband affiliate's unprofitability is worth the risk of a loan—in an amount and tenor that the law does not limit—that may be made on "the electric utility's lowest cost of capital," as the Colorado law provides. Utility regulators typically impose "ring-fencing" requirements to ensure that utility assets do not have needless exposure to more risky ventures, though neither the Colorado nor Georgia laws, nor any of the others, include these protections. Therefore, it will be up to either individual co-ops or state legislatures to provide them for their members.

PROPOSED SOLUTIONS TO PROTECT CONSUMERS

Properly Allocate Costs Within Affiliate Transactions in the Utility Industry

It is difficult to avoid all cost-sharing and cross-subsidizations when a company is providing multiple products or services. After all, it is impossible to know the exact percentage of someone's time attributable to each business. But, it is always in the electricity customers' best interests to see that cross-subsidization of non-electricity services is held to a minimum. This financial objective can best be accomplished with effective and appropriate cost allocations to both businesses, effective transfer pricing rules and independent management teams for both organizations.

When costs are incurred that support more than one business, prudent management will allocate costs to each to ensure appropriate decisions are made about product development and design, investments, pricing, sales and other important business functions. According to the Corporate Finance Institute: "Cost allocation is an important process for a business because if costs are misallocated, the business might make wrong decisions to overprice/underprice a product or invest unnecessary resources in non-profitable

30. Georgia S.B. 2, § 46-3-200.2(5).

products."[31] In other words, product should not be underpriced. This is a seemingly simple concept. And, while companies do not necessarily underprice intentionally, the impacts when they do can be calamitous.

To envision the concept of effective cost allocation, imagine a company that makes only pens and pencils, and that the company has $10 million in shared expenses—costs that are incurred for both products. The shared costs include factory space, rents, insurance, executive salaries and others. If the company failed to allocate those costs appropriately and instead absorbed all of the costs in the pen business, the company would be able to sell pencils for a lot less than any of its competitors. Of course, the sales department and business leaders of the pencil business would call this ideal. The flip side, however, is that the pen business would be faltering because it would be saddled with costs it could not recover, since its pens would be more expensive than those of its competitors. Ultimately, this scenario would bankrupt the company: It would sell as many pencils as it could produce, but it would not be able to sell pens, and so would not recover its overhead costs and would not be able to pay for executive salaries, rents, insurance or the other shared costs.

This may sound far afield, but it is directly relevant to the broadband scenario. If a co-op decides to invest in a broadband business and does not allocate costs correctly, it can severely damage the parent company: the co-op, or more importantly, the members of the co-op. Yet unlike in the truly private sector, where competition would police the worst abuses, the co-op may not be bankrupted because it has an exclusive service territory and a captive set of customers. Instead, the co-op members who pay the tab for electricity would end up paying more than they should.

There is no best way to allocate costs. There are, however, several agreed-upon guiding principles in the oversight of utility corporations. The National Association of Regulatory Utility Commissioners (NARUC) has provided significant guidance on the cost allocation issue. The association has written on cost allocation at least twice: It has published an approximately 200-page *Cost Allocation Manual* (NARUC CAM),[32] as well as *Guidelines for Cost Allocation and Affiliate Transactions*.[33] The Guidelines were specifically adopted after NARUC's members—the state utility commissions—passed a resolution regarding cost allocation in the energy industry, identifying the issue as an important area of concern in utility regulation.[34] The objective of the Guidelines with respect to affiliate transactions is to "lessen the possibility of subsidization in order to protect monopoly ratepayers and to help establish and preserve competition in the [other] markets."[35] The NARUC CAM and Guidelines are not binding on any state regulator, investor-owned utility or co-op. However, they represent a set of best practices that have long been cited in the determinations that utility regulators make on these important questions. The National Rural Electric Cooperatives Association (NRECA) provided input into the Guidelines.[36]

NARUC's Guidelines are particularly informative for affiliate transactions, such as those between an electric co-op and its broadband affiliate. "The prevailing premise of these Guidelines," they state, "is that allocation methods should not result in subsidization of nonregulated services or products by regulated entities."[37] The Guidelines recognize that "utilities have a natural business incentive to shift costs from nonregulated competitive operations to regulated monopoly operations since recovery is more certain with captive ratepayers. Too much flexibility will lead to subsidization."[38] The first principle for affiliate transactions that the Guidelines state is that, generally speaking, "the price for services, products and the use of assets provided by a regulated entity to its nonregulated affiliates should be at the higher of fully allocated costs or prevailing market prices."[39] In practice, this means that a co-op should be charging its affiliate the same price it would charge some other provider for easements, property rights, pole attachments and other services. It also means that the co-op has to charge its broadband affiliate for services it might provide like billing, customer care, answering phone calls and making service calls. In fact, if it provides service calls, the co-op needs to include the costs for insurance, trucks, gasoline and maintenance of those trucks, as well as any other related expenses to the affiliate. Instead of providing that the affiliate must pay the higher of cost or market, it requires that the co-op must make services available to other broadband companies at the same price. This certainly incentivizes appropriate pricing behavior in the co-op, but if priced incorrectly, this provision could potentially further harm the co-op customers.

31. See "Cost Structure," Corporate Finance Institute, 2019. https://corporatefinanceinstitute.com/resources/knowledge/finance/cost-structure.

32. "Electric Utility Cost Accounting Manual," National Association of Regulatory Utility Commissioners, January 1992. http://pubs.naruc.org/pub/53A3986F-2354-D714-51BD-23412BCFEDFD.

33. "Guidelines for Cost Allocations and Affiliate Transactions," National Association of Regulatory Utility Commissioners. http://pubs.naruc.org/pub/539BF2CD-2354-D714-51C4-0D70A5A95C65. (Hereafter referred to as "Guidelines."

34. Ibid., p. 1.

35. Ibid.

36. Ibid. NRECA has its own guide to ratemaking, and it may address cost allocation questions. However, NRECA states that the guide "should be treated as confidential and only shared with others, such as cooperative advisers and consultants, on a 'need to know' basis." Since the NRECA manual is not accessible to members of the public generally, we do not believe it is appropriate to rely on it in policymaking on these issues. https://www.cooperative.com/programs-services/bts/transmission-distribution/Pages/NRECA-CFC-Rate-Guide.aspx.

37. "Guidelines," p. 1. http://pubs.naruc.org/pub/539BF2CD-2354-D714-51C4-0D70A5A95C65.

38. Ibid., pp. 3-4.

39. Ibid., p. 4.

The Guidelines also suggest that the electricity utility prepare a cost allocation manual itself and submit it to the regulator (or to the board of directors, in the case of a self-regulated co-op). The cost allocation manual should be publicly available with any sensitive information redacted from public view.[40]

In the absence of appropriate cost allocations and affiliate pricing, customers suffer at least two (and likely many other) material harms. The first is simple: The electricity prices they pay in this arrangement will be too high. With those high prices, customers subsidize the broadband business, thereby artificially reducing the costs of that service to customers who buy it.

In some circumstances, the low-priced broadband service might seem acceptable. For example, if 100 percent of the electricity customers also purchased the co-op's broadband offering, then notwithstanding cross-subsidies, in the aggregate, the payments may even out in the end. However, that assumption ignores one critical element: Competition exists in the broadband market from at least satellite providers and possibly also from WISPs and cellular wireless providers. And, as discussed in the introduction, when broadband is deployed, many potential customers nevertheless choose not to adopt it. Cross-subsidies from the electricity to the broadband unit of business will therefore tend to disadvantage the electricity consumers who do not adopt the co-op's broadband offering.

Even if one accepts, hypothetically, that broadband offered through the co-op will gain broad or near-universal adoption, there is another harm to be considered: that the subsidy will keep competition out of the market. Competitors will make rational decisions. If a competitor is seeking to invest in an area where a co-op serves electricity customers and offers broadband services, it might make the educated choice not to enter the market if utility subsidies are present. The elimination of potentially lower-cost and higher-access alternatives harms 100 percent of the customers, regardless of whether all or none of them are also using the co-op broadband service.

The question of which costs should be assessed against the broadband company (or any affiliate) is somewhat tricky to answer. As stated above, cost allocation is more art than science. But this much is clear: Any resource that is consumed in the delivery of broadband should be charged in some way to the broadband affiliate. In fact, every utility cost should be scrutinized to see if it is used in the provision of broadband services, including management salaries, legal and regulatory costs, fleet management, fleet maintenance, fuel, billing and billing systems, office space, mortgages, rents, insurance and so on. If the broadband business is on the agenda of a meeting of the co-op's trustees, then some portion of each of the attendees' compensation and benefits should be allocated to that business. The allocations need to be that granular in order to instill a culture wherein protection of electricity consumers is paramount. This line of thinking needs to permeate the co-op business.

Costs generally are categorized into two distinct buckets: direct and indirect (the latter are sometimes called "common"). Direct costs are those that would not be incurred except for the existence of the broadband business. For instance, the utility might incur direct costs for filing for an FCC license or building some type of equipment for the broadband business. Those direct costs should be directly "assigned" at 100 percent to the broadband business. Indirect costs are those that would be incurred for both businesses. These would include the executives' time or the billing system and department. These costs should be "allocated" based on some reasonable allocator. For executives, a reasonable allocator might be hours addressing the respective businesses. For the billing department and billing system, a reasonable allocator would be revenues from the respective businesses. Allocators and allocation factors can and will change over time. If the business is successful and revenues increase, revenue is still an appropriate allocator, but the percentage will be higher. That is appropriate and is similar to what would happen if the broadband company was completely independent. If the broadband company outsourced billing, its costs would increase as the company grew.

And, as a final consideration, the appropriate price for a loan must be addressed. As discussed above, Colorado prohibits any loans at an interest rate below the electricity utilities' lowest cost of capital. The Alabama and Mississippi laws have implemented a more relaxed standard, allowing loan terms that the board determines to be appropriate and authorizes. Utilities generally have lower costs of capital than most companies because of regulatory protections that usually allow them to pass along costs to a set of consumers who have no choice in their provider. The question, then, is whether the loans should be made at these rates.

Interest rates are designed to account, in some part, for the risk of the loan. Market pressures, competitive pressures, technological change, the startup nature and many other attributes of a broadband company would suggest that the risk profile of the affiliate is significantly different from that of its electric co-op affiliate. Thus, it likely is not prudent to offer a loan to a company with a risk profile of a broadband provider at the interest rate that is appropriate for an electric co-op. For these transactions, a "higher of" standard should be applied to the cost of capital that the co-op either has had lent to it or that is available to broadband firms on the open market. Such a standard ensures that the consumers of the

40. Ibid., p. 3.

essential service of electricity, which is a monopoly, are not tacitly allowing their consumer relationship to capitalize a business at the risk of higher rates to themselves.

Enact Accounting and Financial Protections

Cross-subsidization is not a new issue; it has been part of the utility landscape since the origins of ratemaking. NARUC has provided significant guidance on cost allocation. In particular, it has stated unequivocally that costs should be allocated appropriately to utility services, customer classes and lines of business that incur costs.[41] NARUC also suggests that all services provided to affiliates should be provided at cost or at the market price of the service if higher than cost.[42] Rigorously following this guidance will protect the co-op's customers from subsidizing broadband services.

Bringing a second business (broadband) into the co-op will require some additional accounting discipline. For example, some salaries will need to be allocated. The most precise way would be through some type of time-keeping mechanism. Of course, if the implementation of the allocator (e.g., timesheets and the associated recording and analysis of hours) costs more than the benefit derived from the allocation, it defeats the purpose. A realistic estimate might suffice. Virginia has recently issued an order allowing a co-op to enter into certain affiliate agreements and has required some of the accounting recommendations discussed above, notably including a limitation of the utility's services provided to the affiliate to only those specifically approved by the commission.[43]

Establish Independent Governance and Management

Independent governance and management structures create the correct incentives for allocations and pricing. This is not because the management of the affiliate is willing to take on more costs. Rather, the independent co-op management would be seeking to increase revenues and shed costs, and appropriately charging an affiliate is a simple way to accomplish both of those objectives. The independent boards would support these decisions. Broadband management would know that it is receiving products and services that it can trust from a vendor it can trust at a fair price.

A singular board governing both companies might make decisions differently. For example, the single board would have to balance decision-making such that neither entity is harmed when in fact it could be making a decision that is contrary to both electricity consumers' interests and the integrity of the broadband business model. The most obvious example of this is the purpose of this article, cross-subsidization. The single board would, as the Guidelines anticipated, have the "natural incentive" to shift costs to its captive ratepaying customers to lessen the burden on the affiliate.

'Ringfence' the Affiliate

Ringfencing is functionally separating portions of a company's assets and finances even if that portion of the business is not operated independently.[44] Ringfencing should be the minimum corporate separation standard deployed when a co-op starts a broadband affiliate, as it accomplishes many goals related to the cost allocation issue discussed above, but importantly it will also protect the co-op and its members if the broadband company is forced into bankruptcy. If not ringfenced, creditors might have claims to co-op assets such as easements, right of ways, billing systems and others. Through a process of ringfencing and internal contracting, it should be made perfectly clear that the broadband affiliate is its own company, even if it has the exact same management team as the co-op.

Legislative and Regulatory Recommendations

As co-ops seek statutory changes to allow them to develop broadband resources, legislators and co-ops themselves should be primarily concerned with protecting the co-op members. Accordingly, government approvals allowing co-ops to enter the broadband business should be conditioned on several prerequisites:

1. The creation of a separate and distinct legal entity from the co-op to house the broadband affiliate (the minimum standard should be a thorough ringfence to protect the co-op members, but a completely distinct business entity would be a more protective standard);
2. The publication of a cost allocation manual and implementation of transparent cost allocation methodologies;
3. A transparent definition and prohibition of cross-subsidies between the co-op and the affiliate;
4. A full and appropriate allocation of costs to the affiliate;

41. "Electric Utility Cost Accounting Manual," National Association of Regulatory Utility Commissioners, January 1992, p. 12.

42. "Guidelines," p. 4. http://pubs.naruc.org/pub/539BF2CD-2354-D714-51C4-0D70A5A95C65.

43. See "Final Order," Joint Application of Mecklenburg Electric Cooperative and Empower Broadband, Inc., Virginia State Corporation Commission, Jan. 30, 2019. http://www.scc.virginia.gov/docketsearch/DOCS/4%235f01!.PDF. See also, Central Virginia Electric Cooperative Prefiled Staff Testimony, Case No. PUR-2018-00125, Feb. 26, 2019, pp. 5-14. http://www.scc.virginia.gov/docketsearch/DOCS/4%23pr01!.PDF.

44. Subcommittee on Accounting and Finance, "Ring Fencing Mechanisms for Insulating a Utility in a Holding Company System," National Association of Regulatory Utility Commissioners. http://regulationbodyofknowledge.org/wp-content/uploads/2013/03/Devlin_Ring_Fencing_Mechanisms.pdf.

5. Annual reporting and disclosure of all intercompany transactions;
6. Transparent and auditable allocations to the affiliate;
7. Implementation of the "higher of cost or market" standards for affiliate transactions, including financial transactions such as loans;
8. Independent management and governance structures; and
9. Competitiveness protections and dispute adjudication procedures as contained in the Colorado and Georgia statutes.

ANTI-COMPETITIVE PRACTICES AND LANDOWNER RIGHTS

Last century, rural landowners entered into contracts with electric co-ops, providing easements for electricity distribution infrastructure in exchange for the ability to receive this essential service. The state laws discussed in this policy study retroactively amend these existing contracts between landowners and private corporations. It is a rare and aggressive action for a state to interfere with existing contracts by adding language that was not agreed to when they first were formed.[45] Even the phrasing of the laws provides an indication of how sweeping they are; in the words of the Maryland law: "this Act shall be construed to apply retroactively and shall be applied to and interpreted to affect all real property, rights of way, and easements held by an electric cooperative."[46] A co-op seeking to exercise its new legal rights relative to those of landowners need only take relatively perfunctory steps. In Colorado, for example, a co-op now must only provide a written notice to a landowner in order to assume this additional easement over the landowner's private property.[47] In Texas, S.B. 14 unilaterally gives electric co-ops a right to use their easements for broadband, even when the easement specifically restricts its use.[48] At the same time, should additional property damages occur through the installation of broadband infrastructure, the laws shift the burden to the landowner to litigate for these damages in state courts.[49]

Advocates have heralded these attributes of the laws as a feature, not a flaw, of the legislation. Before the passage of such laws, "cooperatives that wanted to install communications infrastructure, such as fiber optic lines, along their electric easements would have to gain permission from each individual landowner to attach fiber to the existing poles."[50] Indeed, the laws are a noteworthy inversion of the landowner protections that are conventionally part of eminent domain, wherein the legal burdens associated with consummating a transaction to acquire, use and compensate property owners rests with the government or the developer asserting a public use over the rights of a private landowner.

There are sound policy reasons why a state legislature might want to eliminate the transaction costs associated with the typical use of eminent domain and instead reinterpret electric co-ops' easements as entailing a right to install broadband infrastructure. After all, that infrastructure is likely to be relatively unobtrusive, and it serves a relatively clear public interest to provide rural areas with a service that is, if not absolutely essential, at least an important part of life to so many. Nevertheless, in passing these laws, the states in question have used their sovereign prerogative to take land and give it carte blanche to a predefined set of corporations. This is remarkable.

'Most Favored Nation' Provisions

If the public good in question in these legal enactments is the availability of broadband to rural Americans, then the sovereign right that the state is using to meet this goal should be open to all comers who can provide broadband; that is, a wider universe than simply the electric co-op or whomever it elects to provide broadband service.

The political framing in favor of these laws has been a call for "ushering in better rural connectivity" and principally refers to the laws' purpose as having "authorized co-ops to deploy broadband infrastructure along existing electric easements."[51] Meanwhile, the usual opposition to them concerns whether electric co-ops will engage in price discrimination against other broadband providers that seek to attach their broadband delivery infrastructure to the co-op's electricity poles. This echoes a separate debate over whether and how the rates for "pole attachments" by electric co-ops should be regulated. Such rates, unlike those of investor-owned utilities, are traditionally not subject to the

45. The Colorado law defines an electric easement as "a recorded or unrecorded easement, right-of-way [...] or similar right in or to real property [...] regardless of whether the easement or other right is exclusively for the provision of electric service." S.B. 19-107, § 40-15-601(5). https://leg.colorado.gov/bills/sb19-107.

46. Maryland S.B. 634, § 2. https://legiscan.com/MD/text/SB634/2019.

47. Colorado S.B. 19-107, § 40-15-602(2). https://leg.colorado.gov/bills/sb19-107.

48. Texas S.B. 14, § 181.048(b). https://capitol.texas.gov/tlodocs/86R/billtext/pdf/SB00014F.pdf#navpanes=0.

49. The Colorado law provides a two-year statute of limitations for a landowner to make a claim and limits the likely recovery of attorney fees. S.B. 19-107, § 40-15-603. https://leg.colorado.gov/bills/sb19-107.

50. Katie Kienbaum, "New State Laws Ease the Way for Electric Co-op Broadband," Institute for Local Self-Reliance, July 18, 2019. https://muninetworks.org/content/new-state-laws-ease-way-electric-co-op-broadband.

51. Ibid.

jurisdiction of either federal or state electricity or telecommunications regulators.[52]

As part of the concessions the proponents of electric co-ops have made to the existing broadband industry, several of the state laws discussed in this policy study have incorporated what may be called "most favored nation" provisions. They require third-party broadband providers to be subject to rates that are not higher than what a broadband affiliate is charged. A representative example is Texas's language on this point, which provides:

> The monetary rates applicable to an electric cooperative or electric cooperative affiliate for attaching broadband facilities on the electric cooperative's poles must be just and reasonable and may not be less than the monetary rates the electric cooperative charges to other broadband service providers for attaching broadband facilities to the electric cooperative's poles.[53]

A similar "most favored nation" condition applies to the "terms and conditions" of the commercial arrangements between electric co-ops and third-party broadband providers. This language is positive but unfortunately does not feature in each state law. Maryland, for example, has no such protection.[54] However, if cross-subsidies exist or capital infusions to the broadband affiliate are made too generously, it can defeat the competitive neutrality to which this language aspires. This is because the broadband affiliate, even while nominally bearing the charge for pole attachments, can receive an effective discount from the electric co-op if the appropriate protections discussed in the section above are not in place. A "most favored nation" provision is nevertheless an important protection to ensure that government, in using its power to rewrite contracts retroactively, is not uniquely advantaging a single commercial interest.

Alternative Approaches to Expand the Use of Easements

One hallmark of recent FCC policymaking on broadband subsidies has been to transform these programs from entitlements into programs into which various providers must bid in order to obtain government support. In its recent reforms to the Connect America Fund programs, the FCC has set minimum quality standards and deployment timelines, and then allowed various broadband providers to submit bids to serve broadband to particular areas with those minimum criteria in mind.[55] The bid represents the amount of subsidy that the broadband provider asserts is required for it to serve an unserved or underserved area. The company that asserts via its low bid that it can deploy broadband at the least cost to the public coffers wins such an auction. The FCC approach to its reforms, which it continues in the $20 billion subsidy program it proposed in August 2019, is intended to ensure that valuable government subsidies have the greatest impact on consumers' ability to obtain broadband.[56]

A similar approach might be workable in the context considered herein. While not awarding subsidies, the states discussed in this paper are using a government power to take property for the installation of broadband infrastructure. These states could better align their laws to the policy goal of promoting access to broadband if they were to use low- or no-cost access to these expanded easements as an inducement to providers who would compete against one another for that entitlement. In such a design, an auction-like process that is similar to (though less complex than) the FCC's could be employed, wherein companies make "bids" associated with promises to deploy broadband at certain speed, along a certain timeline and at a certain cost per subscriber. In exchange, the winning "bidder" would receive a low- or no-cost easement—and perhaps even the exclusive right to its use for a time.

CONCLUSION

Remarkably, the very real possibility that electricity consumers will end up cross-subsidizing risky broadband undertakings has seldom featured in the debates in state legislatures that have considered the laws reviewed by this policy study. Colorado and Georgia alone contain an architecture for the protection of electricity consumers, and even in those cases, much relies on the implementation of sound accounting and financial practices, including those discussed in this study.

As we enter the third decade of the 21st century, the public demand for greater broadband access in rural areas must be heeded. However, the technology mediums by which broadband has been delivered are changing rapidly. There is a very real possibility that an expensive broadband network deployed today in a rural area will either be too expensive or

52. For two opposing views on this debate, compare Brian O'Hara, "Rural Electric Cooperatives: Pole Attachment Policies and Issues," National Rural Electric Cooperative Association, June 2019. https://www.cooperative.com/programs-services/government-relations/regulatory-issues/Documents/2019.06.05%20NRECA%20Pole%20Attachment%20White%20Paper_FINAL.pdf; and Michelle Connolly, "The Economic Impact of Section 224 Exemption of Municipal and Cooperative Poles," NCTA: The Internet & Television Association, July 12, 2019. https://www.ncta.com/sites/default/files/2019-07/NCTA%20Muni%20and%20Coop%20Poles%20Connolly%20Paper%20Ex%20Parte%20Filing%207-22-19.pdf.

53. Texas S.B. 14, § 181.048(c). https://capitol.texas.gov/tlodocs/86R/billtext/pdf/SB00014F.pdf#navpanes=0.

54. Maryland S.B. 634. https://legiscan.com/MD/text/SB634/2019.

55. "Connect America Fund Phase II Frequently Asked Questions," Federal Communications Commission, updated Nov. 30, 2017. https://www.fcc.gov/consumers/guides/connect-america-fund-phase-ii-faqs.

56. Notice of Proposed Rulemaking in the Matter of Rural Digital Opportunity Fund and Connect America Fund, FCC 19-77, Aug. 1, 2019. https://docs.fcc.gov/public/attachments/FCC-19-77A1.pdf.

soon rendered obsolete and thus will not attract the consumer base necessary to repay its deployment costs. In this situation, there are significant risks for electric co-ops and their members to consider before they choose to mortgage their systems or engage in substantial support of such networks.

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