

Prepared Testimony of

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*Before the*

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Good afternoon, Chairperson Sturla, Representative Malagari, and Honorable Members of the House Democratic Policy Committee. I appreciate this opportunity to speak with you today about the specific challenges when it comes to using broadband service to provide education and health care to Pennsylvanians. Those challenges have become particularly evident in light of what we have learned about the important role that broadband plays in education and health care in the wake of COVID 19. I will close with some comments on our current education efforts on broadband on our webpage.

I will address several items. The first are our proposed rulemaking, the pending legislation in SB 1112, the *2020 Joint State Government Report*, and the Center for Rural Pennsylvania 2019 study of what broadband consumers are actually receiving. The last items are a discussion on the maps that Penn State Extension (PSU) has developed in consultation with the Commission and an update on our consumer education efforts.

These Pennsylvania-specific documents and PSU maps illustrate the issues we face when it comes to using broadband for education and health care. These three proposals and studies all recognize that Broadband Internet Access Service (BIAS) networks and services are critical for education and health care. Broadband is now considered an essential infrastructure of a modern 21<sup>st</sup> Century society when it comes to education and health care.

*Broadband in General.* The terms “Broadband” or “Broadband Access” and “Broadband Service” are the terms that the public often uses when they are talking about

BIAS. BIAS is the internet service that residential, commercial, industrial, educational, and health care consumers purchase from an Internet Service Provider (ISP). Everyone needs BIAS today to communicate, compile data, do research, stream video over the Internet and, now, obtain education and health care. BIAS may be indispensable to education and health care, but it is still far from ubiquitous, a fact that is vividly demonstrated in the ongoing pandemic.

Broadband for education and health care is part and parcel of a general concern with the broadband challenges Pennsylvania faces. I have testified before, and reiterate today, about the legal need to classify broadband as a telecommunications service along the lines of a common carrier public utility service.<sup>1</sup> This is evident in the current pandemic. It is supported by a February 2020 *Brookings Study* which considers broadband to be an essential infrastructure.<sup>2</sup>

As I have testified before, moreover, broadband policy development is a two-part challenge.<sup>3</sup> The first challenge is to build networks for broadband in high cost, typically

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<sup>1</sup>Testimony of Chairman Brown Dutrieuille, Joint Senate & House Democratic Committee (January 9, 2020), particularly pp. 3-4 (*Net Neutrality Testimony*) available at [http://www.puc.pa.gov/General/pdf/Testimony/BrownDutrieuille-HS\\_Dem\\_Comm-NetNeutrality010920.pdf](http://www.puc.pa.gov/General/pdf/Testimony/BrownDutrieuille-HS_Dem_Comm-NetNeutrality010920.pdf) (text) and [http://www.puc.pa.gov/General/pdf/Testimony/Chair\\_GBD-Net\\_Neut\\_Appx010920.pdf](http://www.puc.pa.gov/General/pdf/Testimony/Chair_GBD-Net_Neut_Appx010920.pdf) (appendices).

<sup>2</sup>Adie Tomer, Lara Fishbane, Angela Siefer, and Bill Callahan, “Digital Prosperity: How Broadband Can Deliver Health and Equity to All Communities,” (Brookings: Metropolitan Policy Program, February 2020) (*Brookings Study*) available at <https://www.brookings.edu/research/digital-prosperity-how-broadband-can-deliver-health-and-equity-to-all-communities/> (last checked 10/1/20).

<sup>3</sup> Testimony of Chairman Brown Dutrieuille Before the Senate Technology and Commerce Committee (September 3, 2019), particularly pp. 1-5 (*Broadband Telehealth Testimony*)

rural, areas. But, as I pointed out in my statement at our recent public meeting about reforming our regulations for telephone service in Chapters 63 and 64, the “last mile” infrastructure used to provide broadband to most consumers on a wireline network is over 90% owned by two industries. Those are the telephone and cable industries.<sup>4</sup> Moreover, these two networks do not go everywhere, and they are not subject to the same legal standards. In many places without cable service, the telephone company is the major provider of broadband. Satellite service can be obtained but it has had capacity, latency and transmission limits. Wireless service may be an alternative service, but it is not available everywhere. Today it is not considered a viable substitute for wireline service.

The *Brookings Study* shows that broadband service is still far from ubiquitous and that broadband works best when consumers have access to wireline and wireless services – not just one or the other.<sup>5</sup> Without ubiquitous service, local school districts or colleges and universities attempting to offer online education to their students using digital technology cannot provide that service. Doctors seeking to provide digital health care to their patients do not have adequate broadband to do that.

The second challenge is ensuring that broadband service is affordable in all areas of Pennsylvania i.e., urban, suburban, and rural, at just and reasonable rates.

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available at <http://www.puc.pa.gov/General/pdf/Testimony/BrownDutrieuille-Senate-RuralHealth090319.pdf>

<sup>4</sup> Statement of Chairman Brown Dutrieuille, Proposed Rulemaking Order – Competitive Classification of Telecommunications Retail Services, Docket No. L-2018-3001391 (August 27, 2020) available at <http://www.puc.pa.gov/pcdocs/1675029.pdf>.

<sup>5</sup> *Brookings Study*, pp. 3-4 available at <https://www.brookings.edu/research/digital-prosperity-how-broadband-can-deliver-health-and-equity-to-all-communitieas/> (last checked 10/1/20)

Affordability means reasonable subscription prices and universal access to devices. It means making sure that consumers have the skills to use those devices and that an agency exists to ensure reliability and has the capability to resolve disputes. Affordability is now the main barrier to broadband adoption.<sup>6</sup>

The construction of broadband-capable networks, sometimes called the “brick” facilities needed to provide this service, and the delivery of broadband over those bricks, sometimes called the “clicks” of BIAS, are capital intensive.<sup>7</sup> This impacts the prices charged for broadband for education and health care. Moreover, there may not always be a solid economic case from the provider’s perspective to build networks in high cost areas. This arises from their fiduciary duty to maximize value for their shareholders; the delivery of broadband where costs exceed revenues may violate that duty. This remains even if legislators, regulators, the public, and recent studies show that broadband is an essential infrastructure like electricity, gas, transportation, and water service.<sup>8</sup>

Even though the costs to build broadband networks are high and the fact that BIAS technology changes very rapidly, the Commission initiated a reform of our long-standing

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<sup>6</sup> *Broadband Telehealth Testimony* (September 3, 2019), p. 3, n. 3 citing the FCC’s 2016 Lifeline Order of April 26, 2016 in FCC Docket Nos. 11-42 and 10-90 available at <http://www.puc.pa.gov/General/pdf/Testimony/BrownDutrieuille-Senate-RuralHealth090319.pdf>

<sup>7</sup> *Broadband Telehealth Testimony* (September 3, 2019), particularly pp. 3-5.

<sup>8</sup> *Brookings Study*, p. 4. Accord General Assembly of the Commonwealth of Pennsylvania, Joint State Government Commission, *Delivery of High-Speed Broadband Services In Unserved Areas and Underserved Areas of the Commonwealth of Pennsylvania, Report of the Advisory Committee on High Speed Broadband* (September 14, 2020), pp. 5-9, particularly Recommendations 2, 5, 6, and 8 (*2020 Joint State Government Report*) available at [http://jsg.legis.state.pa.us/publications.cfm?JSPU\\_PUBLN\\_ID=497](http://jsg.legis.state.pa.us/publications.cfm?JSPU_PUBLN_ID=497).

telecom regulations in Chapters 63 and 64 to address service.<sup>9</sup> One alleged benefit from reforming our long-standing regulations for the first time in 30 years is that any reduction in compliance costs might be directed to fund broadband. This goal must be balanced with the need to retain network reliability and universal service at reasonable rates. The Commission is aware that the General Assembly is considering proposed legislation, SB 1112. SB 1112 would implement a wholesale revision of our telecom regulations in Chapters 63 and 64. This appears premised on the conclusion that the compliance costs to meet Commission regulations are impeding broadband investment in Pennsylvania.

However, the industry supporters have provided no quantified value in alleged savings. There is no statutory mandate that they be quantified nor that the savings be redirected to broadband investment. Any savings arising from a reduction in the \$5 million assessment that industry pays for oversight, including enforcement of Chapters 63 and 64, is paltry compared to the \$500 million cost the FCC thinks is needed to deploy broadband to about 50% of Pennsylvania's unserved areas.

The \$5 million reflects the Commission's last assessment for operations for all regulation of all telecommunications. The Federal Communications Commission's

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<sup>9</sup> See Statement of Chairman Brown Dutrieuille, Proposed Rulemaking Order – Competitive Classification of Telecommunications Retail Services, Docket No. L-2018-300  
[http://www.puc.pa.gov/about\\_puc/consolidated\\_case\\_view.aspx?Docket=L-2018-30013911391](http://www.puc.pa.gov/about_puc/consolidated_case_view.aspx?Docket=L-2018-30013911391)  
(August 27, 2020) available at <http://www.puc.pa.gov/pcdocs/1675029.pdf>;  
<http://www.puc.pa.gov/pcdocs/1675036.pdf> (Motion of Vice Chairman Sweet); and  
[http://www.puc.pa.gov/about\\_puc/consolidated\\_case\\_view.aspx?Docket=L-2018-3001391](http://www.puc.pa.gov/about_puc/consolidated_case_view.aspx?Docket=L-2018-3001391)  
(Final Order).

(FCC) most recent auction proposal to support broadband in unserved areas of Pennsylvania is about \$51 million a year. This FCC support does not address affordability at all. This FCC's \$51 million offer to successful carrier bidders totals about \$500 million over ten years – the period needed to build that broadband network.

To get that \$500 million, Pennsylvania must have bidders in an upcoming auction that will occur on October 22, 2020. The application period closed in July 2020. Those bidders must win that support to serve the unserved areas that the FCC is willing to support. Otherwise, this support that other carriers are getting today to serve those areas may leave Pennsylvania if bidders in other states agree to provide faster service there.

This \$500 million offered to Pennsylvania bidders over the next ten years will not deliver broadband to all unserved Pennsylvanians who need broadband for education and health care let alone employment or entertainment. That support is repurposed support that the FCC is already providing to carriers to provide voice and lower-speed broadband. To get that support in the future, bidders must offer at least 25/3. This is the “Netflix” speed the FCC uses to decide if an area does or does not have broadband. Those who offer faster speeds will get that support over bidders who offer only 25/3.

This repurposed support is not going to make broadband available let alone affordable throughout Pennsylvania. That is because the deployment mandate is limited and there is no affordability mandate.

The support and deployment mandate will only be provided to unserved areas that fall within cost “ranges” as well. No support will be provided if costs are below the auction floor or above the auction ceiling. There is no affordability requirement.

This limited support means that about 50% of Pennsylvania’s unserved areas will not benefit from the auction. That is because those areas are either below the support floor or above the support ceiling. The \$51 million support over the next ten years that Pennsylvania carriers will get if they win the auction will only reach about 50% of our unserved areas. This is important because 44% of Pennsylvania’s census block are without broadband at the minimum speed of 25/3 today.<sup>10</sup>

The recent 2020 Center for Rural Pennsylvania (*CRP 2019 Study*) on broadband in Pennsylvania is instructive.<sup>11</sup> The *CRP 2019 Study* shows what broadband speed consumers are actually getting when they can buy broadband. There is a marked discrepancy between the providers’ claimed speeds and what consumers are actually getting based on speed tests.<sup>12</sup> There is no Pennsylvania county where at least 50% of the populace received “broadband” connectivity at 25/3 as defined by the FCC.<sup>13</sup> These

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<sup>10</sup> These figures come from presentations by Penn State University’s Rural Extension (PSU) on the maps that they have developed in consultation with the Commission. The Commission has been consulting with Penn State to support their goal of creating credible and easy-to-understand broadband maps for Pennsylvania using public information. PSU wants to identify *all* areas that are unserved and build upon public sources to address deployment, affordability, and delivery.

<sup>11</sup>Center for Rural Pennsylvania, *Broadband Availability and Rural Access in Pennsylvania* (June 2019), pp. 42-43 (*CRP 2019 Broadband Study*) available at [https://www.rural.palegislature.us/publications\\_broadband.html](https://www.rural.palegislature.us/publications_broadband.html)

<sup>12</sup> *CRP 2019 Broadband Study*, pp. 65-66.

<sup>13</sup> *CRP 2019 Broadband Study*, pp. 65-66.

findings strongly suggest that broadband marketing is different from what consumers are getting. This suggests that more, not less, regulatory oversight may be appropriate because oversight ensures that consumers get what they pay for. This is different from other concerns noted by the Joint State Government Commission Report.

Nevertheless, I support reform of our regulations. I do so not only because of the alleged savings arising from regulatory reform as opposed to statutory repeal. I agree that our regulations need to be updated to address rapid technological changes that have occurred in the 30 years since our last revision. The fact that broadband has become an essential infrastructure supports regulatory reform but not statutory repeal.<sup>14</sup>

Moreover, as my statement about our rulemaking indicates, there are other important issues. This includes reliability and universal service, quality of service, public education, and dispute resolution. Requirements are needed here so that providers deploying broadband-capable networks will offer their cache of services to consumers.

My statement explains why those values must remain as important and enforceable obligations. As explained below, regulatory or statutory reforms that minimize or outright repeal Commission authority will likely not ensure that broadband service is provided at home or in the school districts or medical centers. That is probably due to the permanent tension that exists between economic pricing and policy pricing for

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<sup>14</sup> *Accord, 2019 CRP Study.*

services provided by an essential infrastructure. This is also likely to occur given the commercial entities' obligation to maximize shareholder value compared to the legislators and regulators focus on the public interest independent of shareholder value.

The most recent *2020 Joint State Government Report* is instructive and warrants detailed consideration and not just because I was part of that work. Those recommendations raise issues that need to be addressed when it comes to deploying broadband-capable networks in a ubiquitous manner so that Pennsylvania citizens can receive broadband-based education and health care services.<sup>15</sup>

It should be noted that the authors of those recommendations could not agree on a broadband speed standard for Pennsylvania due in part to concerns about an impermissible delegation of legislative authority.<sup>16</sup> Impermissible delegation has not been an issue at the federal level. Congress authorizes the FCC to advance voice and broadband in language broad enough to uphold FCC regulatory increases in broadband speeds over time. The FCC can act consistent with, and in furtherance of, federal law. This includes a universal service mandate to ensure that there are comparable rates for comparable services in rural and urban America.

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<sup>15</sup> General Assembly of Pennsylvania, Joint State Government Commission, Report of The Advisory Committee on High Speed Broadband Service (September 2020), particularly pp. 5-9 (Recommendations), pp. 31-37 (Education), and pp. 39-45 (Health care) (collectively *2020 Joint State Government Report*) available at [http://jsg.legis.state.pa.us/publications.cfm?JSPU\\_PUBLN\\_ID=497](http://jsg.legis.state.pa.us/publications.cfm?JSPU_PUBLN_ID=497) (last checked 10/1/20).

<sup>16</sup> *2020 Joint State Government Report*, p. 7.

The Committee could consider a similar approach when it comes to broadband speeds and the delivery of broadband for education and health care as suggested in my prior testimony.<sup>17</sup> That way the Commonwealth is not disadvantaged over time compared to other states. Our providers will remain eligible for federal support. That support will be important to broadband education and health care.

It should also be noted that the *2020 Joint State Government Report* does not view 5G wireless as a solution for rural broadband.<sup>18</sup> The same is likely to prove true when it comes to affordable wireline and wireless broadband service as well.

The *2020 Joint State Government Report* was skeptical about claims that regulatory reforms or statutory repeal of Commission authority will advance broadband. This is evident in the *Report's* cautionary observation that any repeal of regulations addressing network reliability and affordability claimed by the impacted providers should establish a nexus between compliance costs and broadband investment. This should promote broadband deployment in unserved areas of the Commonwealth.<sup>19</sup> It is possible that the annual reports could identify the savings and show where the savings are spent.

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<sup>17</sup> Testimony of Gladys Brown Dutrieuille before the Pennsylvania House of Representatives Consumer Affairs Committee, House Bill 1417 (August 24, 2015), p. 12. (*HB 1417 Testimony*) available at

[http://www.puc.pa.gov/General/pdf/Testimony/Brown\\_HB\\_1417\\_Final\\_Testimony\\_8-24-2015.pdf](http://www.puc.pa.gov/General/pdf/Testimony/Brown_HB_1417_Final_Testimony_8-24-2015.pdf); *Net Neutrality Testimony*, p. 20 available at

[http://www.puc.pa.gov/General/pdf/Testimony/BrownDutrieuille-HS\\_Dem\\_Comm-NetNeutrality010920.pdf](http://www.puc.pa.gov/General/pdf/Testimony/BrownDutrieuille-HS_Dem_Comm-NetNeutrality010920.pdf) (text) and [http://www.puc.pa.gov/General/pdf/Testimony/Chair\\_GBD-Net\\_Neut\\_Appx010920.pdf](http://www.puc.pa.gov/General/pdf/Testimony/Chair_GBD-Net_Neut_Appx010920.pdf) (appendices).

<sup>18</sup> *2020 Joint State Government Report*, p. 17.

<sup>19</sup> *2020 Joint State Government Report*, p. 127.

The *2020 Joint State Government Report* noted that states like California have imposed broadband deployment commitments in connection with their approval of mergers, including the recent Sprint/T-Mobile merger. That did not occur in Pennsylvania despite the objections of myself and the Vice Chairman. A majority was unwilling to impose broadband deployment commitments on behalf of unserved areas.<sup>20</sup>

The *2020 Joint State Government Report* also recommended the establishment and creation of an independent broadband authority to oversee and support broadband deployment. This includes a particular emphasis on grants and loans, including federal funding. The entity's existence is limited to six years.<sup>21</sup>

However, the Federal Communications Commission's (FCC) first effort to support broadband created a funding program called the Connect America Fund Phase II that went on for five or six years. As that effort comes to an end, broadband remains unavailable to 44% of Pennsylvania's census blocks. The upcoming federal auction set to begin October 22, 2020 envisions a new ten-year time to build broadband but that benefits about 50% of our unserved areas.<sup>22</sup>

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<sup>20</sup> Compare *Joint State Government Report*, p. 136 available at [http://jsg.legis.state.pa.us/publications.cfm?JSPU\\_PUBLN\\_ID=497](http://jsg.legis.state.pa.us/publications.cfm?JSPU_PUBLN_ID=497) (last checked 10/1/20) with *Application of Sprint for Approval of Transfer of Control from Softbank to T-Mobile*, Docket No. A-2018-3003259 (Statement of Chairman Brown available at <http://www.puc.pa.gov/pdocs/1624306.pdf> <http://www.puc.pa.gov/pdocs/1623892.pdf> and Motion of Vice Chairman David Sweet available at <http://www.puc.pa.gov/pdocs/1620905.pdf> and Vice Chairman Dissent available at <http://www.puc.pa.gov/pdocs/1624306.pdf>

<sup>21</sup> *2020 Joint State Government Report*, p. 5-6.

<sup>22</sup> This number is also derived from the mapping efforts PSU has undertaken in consultation with the Commission.

The proposed six-year time period for a state-run broadband funding program warrants serious examination given the experience with federal efforts. This is important because federal efforts benefit about half of our unserved areas over 10 years. This suggests that a longer funding commitment to provide funding may be warranted. It also suggests that the focus should be not only on anchor institutions like schools and medical facilities but also at a consumer's home, office, or commercial establishment.

A funding authority, however long it exists, and consumers will need publicly available mapping and broadband data that relies on open source data and verifiable public information. This ensures that funding agencies, educators, health care providers, and the public have access to information that accurately identifies what areas require broadband support. Correct mapping has been a challenge for many years now.

One challenge noted by the Nobel Prize winning economist, Dr. Jean Tirole, in his study of the concentrated telecommunications industry, is that information is often asymmetrical.<sup>23</sup> This means that legislators and regulators have access to less detailed information than the regulated industry. Without a mandate to provide detailed public information, providers have more complete information. Legislators and regulators are

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<sup>23</sup> Royal Swedish Academy of Sciences: Scientific Background on the Sveriges Riksbank Prize in Economic Sciences, *Jean Tirole: Market Power and Regulation* (October 3, 2014), particularly p. 14 (*Tirole*) available at <https://www.nobelprize.org/uploads/2018/06/tirole-lecture.pdf>

left to rely on limited information that substantially influences their decisions.<sup>24</sup> This means that legislators and regulators with the public fiduciary duty to advance the public good rely on information provided by agents with a private fiduciary duty to maximize shareholder value. This happens not because there is no information but because that information is not public and verifiable.

Today most detailed maps on, and information about, broadband are proprietary and confidential. This occurs because that information reflects an understandable focus on broadband for private market development and maximizing shareholder value. Those maps and information do not focus on broadband as a delivered public good because it is in the public interest. The FCC attempted to resolve this conflict in fiduciary duties between private carriers and public officials with a map that relies on limited public filings made by providers who focus on market deployment. The resulting limitations in the FCC maps are well known. While the FCC is under a mandate to develop new and accurate maps, that has not yet started in earnest, and remains incomplete.

Moreover, the last public mapping in Pennsylvania occurred under the American Reinvestment and Recovery Act of 2009. Those maps are now outdated if not obsolete. They should not be relied on as accurate and updated information is needed to identify where providers should deploy their broadband-capable networks, particularly for agency

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<sup>24</sup> It also facilitates regulatory capture, a practice in which public officials rely on and identify more with the regulated industry than the general public. *Tirole*, pp. 16-18.

funding decisions. Better maps and information are also needed to ensure that the providers consistently deliver the requisite speeds for their proffered broadband service.

However, Pennsylvania is ahead of federal mapping efforts today. This is primarily due to mapping results produced by Penn State Rural Extension (PSU) in consultation with the Commission. We have provided federal information and expertise; PSU provides in-depth knowledge of mapping and public database information. This collaboration has produced maps of national interest to the FCC's Mapping Taskforce, Purdue University, the White House Broadband Task Force, and a consortium of universities addressing precision agriculture, the use of broadband for farming.

This mapping effort focuses not only on networks but will focus on affordability and delivery going forward. The first PSU map was created in response to the Commission's concern to get Pennsylvania bidders to participate in the upcoming October auction of over \$16 billion in federal support of which \$51 million is earmarked for Pennsylvania. The link to that map is on our website.<sup>25</sup> Neither the FCC auction nor the PSU map address affordability.

The most recent PSU map was developed in consultation with the Commission in response to a request from our Consumer Advisory Council to show where broadband is available in counties and in our 500 public school districts. That map shows what areas

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<sup>25</sup> The PSU auction map can be access on the Commission website below.  
[http://www.puc.state.pa.us/consumer\\_info/telecommunications/broadband\\_high\\_speed\\_internet\\_service.aspx](http://www.puc.state.pa.us/consumer_info/telecommunications/broadband_high_speed_internet_service.aspx)

within counties or school districts lack broadband at the 25/3 speed used by the FCC to show what areas do not have broadband and might get funding.

This 25/3 is the so-called “Netflix Speed” in common parlance. It is used because it is considered the minimum needed to optimize *inter alia* the streaming audio and video needed for education and health care. This minimum speed changes over time. There are already FCC advocates seeking to increase the broadband definition to at least 100 Mbps up/down when deciding what areas do not have broadband service.<sup>26</sup>

Those current PSU maps use public information to demonstrate every area in Pennsylvania that is without broadband today. They will be updated as the FCC makes new data available.

The Commission and PSU have already done multiple mapping demonstrations of these mapping results to the FCC’s Mapping Taskforce, Purdue University, the White House Broadband Task Force, the Pennsylvania Department of Education, multiple bidders and county or school district officials in Pennsylvania. The goal is to help them visually see where Pennsylvania faces broadband challenges. PSU is also working with the Commission to address the mapping of affordability and delivery to consumers in response to the *CRP 2019 Broadband Study* and the *2020 Joint State Government Report*.

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<sup>26</sup> See, e.g., Statement of FCC Commissioner Jessica Rosenworcel available at <https://docs.fcc.gov/public/attachments/FCC-20-112A2.pdf> calling for at least 100 Mbps speeds.

I would suggest that the Commission and PSU experience and expertise in rapidly developing critical mapping for broadband be encouraged and supported. Any effort to create yet another expert authorized to develop still newer maps may be inadvisable given the pressing importance of broadband, the upcoming auction of over \$16B for broadband set to occur on October 22, 2020, and a looming auction of about \$8 billion for mobile broadband of which \$1 billion will be for precision agriculture.

The second and third recommendations in the *2020 Joint State Government Report* recognize that entities other than commercial entities should be encouraged to deploy networks and notes that economic feasibility is frequently cited as a barrier to rural broadband.<sup>27</sup> This, by extension, impacts broadband-based education and health care.

These recommendations focus on network deployment by entities other than commercial providers in those instances where revenues are insufficient to warrant reliance those providers or, alternatively, providing incentives to those providers in those areas. This approach seems to jettison universal service which leverages economies of scale by requiring a commercial provider to serve all consumers in a designated urban and rural area. This reliance on new entities with limited experience is proposed even though commercial providers are already well-versed in broadband. This seems to favor market differentiation in which economically attractive areas are served by commercial entities while the remaining areas become public charges by default.

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<sup>27</sup> *2020 Joint State Government Report*, p. 6.

This is not without merit because it reflects one approach to the tension existing between economic pricing and policy pricing. Economic pricing of a good or service, including broadband, occurs when private providers deliver service only where there is a market case. They do so to avoid any violation of their fiduciary duty to maximize gain for their shareholders. On the other hand, policy pricing occurs when the public interest in a good or service, like broadband, is so important that public officials deem it a public good. That may be the case today for broadband as an essential infrastructure.

Policy pricing was the practice in the monopoly era in which lower urban rates were averaged with higher rural rates to develop a uniform rate that all consumers paid. Although a patchwork duopoly of cable and telephone providers may have replaced the prior telephone monopoly, the need to resolve the economic differences between rural and urban areas when it comes to the cost to build networks has not disappeared. Neither has the public good arising from ensuring that there is universal service to affordable and reliable service in all areas at just and reasonable rates.

These pricing tensions and realities may necessitate the Committee deciding whether it is going to endorse a market or policy pricing approach to ensure that all areas in Pennsylvania have access to the public good of broadband networks and reliable and affordable service at just and reasonable rates. One way to do that would be by extending today's universal service mandates in the electricity, gas, transportation, voice, and water industries to broadband now that broadband is essential infrastructure.

One way to fund that universal service mandate imposed on voice and other essential infrastructure would be through use of a “pay or play” approach. A “pay or play” approach is one where all providers who deliver broadband service contribute to a public universal fund based on their revenues. This public fund supports not only network deployment but also reliable and affordable service at just and reasonable rates. This approach is modeled on the Carrier of Last Resort (COLR) obligations already imposed in some fashion on other essential infrastructure like electricity, gas, transportation, water, and voice service. Those who do not have a universal service mandate can focus on market deployment. However, they must pay into a public fund that pays an identified or selected provider to build a network that provides reliable and affordable service at just and reasonable rates in areas where there is no market case to do that. My prior testimony raised this matter in suggesting that expansion of a universal service contribution base may be an optimal solution to do just that.<sup>28</sup>

This suggestion is consistent with the need to recognize and address affordability and to prioritize service to unserved or underserved areas as noted in the fifth and sixth

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<sup>28</sup> *HB 1417 Testimony*, pp. 13-16 available at [http://www.puc.pa.gov/General/pdf/Testimony/Brown\\_HB\\_1417\\_Final\\_Testimony\\_8-24-2015.pdf](http://www.puc.pa.gov/General/pdf/Testimony/Brown_HB_1417_Final_Testimony_8-24-2015.pdf). The testimony provides a good overview of broadband challenges in high cost areas whereas today’s testimony focuses not only on broadband networks but also broadband universal service because, since 2015, broadband is now considered an essential infrastructure. Prior Staff presentations to the legislature on the background history of telecommunications and broadband is also available at [http://www.puc.pa.gov/General/pdf/Testimony/Screven-House\\_Broadband\\_Caucus\\_092518.pdf](http://www.puc.pa.gov/General/pdf/Testimony/Screven-House_Broadband_Caucus_092518.pdf) (David Screven) and [http://www.puc.pa.gov/General/pdf/Testimony/Witmer-House\\_Broadband\\_Caucus\\_092518.pdf](http://www.puc.pa.gov/General/pdf/Testimony/Witmer-House_Broadband_Caucus_092518.pdf) (Joseph Witmer).

recommendations of the *2020 Joint State Government Report*.<sup>29</sup> These recommendations recognize that broadband availability will not occur without financial support and that support for lower income consumers is an important part of broadband availability.

When it comes to broadband for education and health care, there is less focus on what regulatory oversight is needed to ensure that deployment commitments are met and that consumers have access to reliable broadband service at just and reasonable rates. They are important but they should also include what forum will resolve disputes between consumers and their provider. This already occurs today with the other essential infrastructure like electricity, gas, transportation, voice, and water.

The recommendation for a uniform price as a low-cost alternative limited to lower income subscribers is noteworthy. It is a variation on the current Lifeline program of the FCC. Lifeline provides eligible consumers \$9.25 in federal support for a voice and/or broadband service regardless of the price charges for that service. That support for voice alone will be reduced to \$5.25 a month come December 1, 2020.

This occurs under the current Lifeline program in which the Commission grants Eligible Telecommunications Carrier (ETC) status. ETC designation is a precondition to receiving federal universal service support to build a network or to provide service to

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<sup>29</sup> *2020 Joint State Government Report*, p. 6.

eligible Lifeline consumers. The states use ETC designation to ensure network reliability, quality of service, 911, and resolution of consumer complaints.

For that reason, I am concerned about recent federal proposals, including a proposed \$50 billion fund to provide \$50 monthly to eligible Lifeline consumers, that abandon the ETC designation process. This is occurring, at least in part, because some major providers do not support state oversight by ETC designation. They want the benefit of federal money without the burden of state oversight that comes with it.

Also, current law limits federal support to “telecommunications” service and not “information” service. This means that “broadband only” providers may not be eligible for Lifeline support. This issue was just remanded back to the FCC in the most recent appeal in the ongoing “net neutrality” debate on how to classify broadband service.<sup>30</sup>

The proposal to eliminate ETC designation advanced by some prominent Democrats has the unintended effect of undermining Democratic efforts to reclassify broadband as a “telecommunications” service. Broadband as a Title II common carrier service is eligible for federal support but broadband as a federal “information” service is not. The abandonment of ETC designation in order to get federal money is supported by major cable and telecommunications providers and some of their trade associations.

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<sup>30</sup> See e.g., *Net Neutrality Testimony* and the accompanying materials for an in-depth discussion of this issue available at [http://www.puc.pa.gov/General/pdf/Testimony/BrownDutrieuille-HS\\_Dem\\_Comm-NetNeutrality010920.pdf](http://www.puc.pa.gov/General/pdf/Testimony/BrownDutrieuille-HS_Dem_Comm-NetNeutrality010920.pdf) (text) and [http://www.puc.pa.gov/General/pdf/Testimony/Chair\\_GBD-Net\\_Neut\\_Appx010920.pdf](http://www.puc.pa.gov/General/pdf/Testimony/Chair_GBD-Net_Neut_Appx010920.pdf) (appendices).

They do not address whether, and where, network deployment commitments will be monitored. There is no detailed examination on how to determine what constitutes an affordable broadband rate and how to support it. Finally, consumer disputes in the nation would become the sole responsibility of an FCC enforcement bureau.<sup>31</sup>

The *2020 Joint State Government Report* does not address these issues. It does not contain recommendations on who monitors and advances affordability. This is an important consideration for those lower-income consumers not eligible for Lifeline but unable to buy expensive broadband service. They exist in all rural and urban areas.

The recommendation does focus on network institutions, such as schools and community facilities, by establishing a minimum high-speed tier and support for special construction charges like one-time build out costs to provide fiber connectivity to schools and libraries. This will likely be the focus of other parties today. I need not discuss this except to note that no such recommendation exists when it comes to health care.

The last two recommendations in the *2020 Joint State Government Report* recognize that market conditions for network deployment do not exist in all areas. They recommend incentives for deployment and a line-item appropriation in the Commonwealth's annual budget for broadband. There is passing reference to verifiable

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<sup>31</sup> See e.g., NARUC letters of June 30, 2020 and July 14, 2020, respectively, on NARUC Letter to Senate Commerce Committee on Importance of the ETC Designation Process at <https://pubs.naruc.org/pub/94D45055-155D-0A36-31A7-88676B3C2CBD> (June 30, 2020) and NARUC Opposition to HR 7160 at <https://pubs.naruc.org/pub/94F1D12A-155D-0A36-31A6-3DC63EE628F5> (July 14, 2020).

standards and objective accountability but that is not explained in detail so it may need more consideration.<sup>32</sup> While there is clearly an accord on using a line-item approach to fund broadband, what that line-item should be and how it operates need more discussion.

One way to optimize use of state funding to build networks and support affordability while ensuring oversight of that money is to create or rely on an agency with experience in regulating industries that deliver an essential infrastructure public good. Such an agency should have a proven track record of credibly informing legislators and the public about broadband challenges. They should have demonstrated sufficient technological, economic, and legal expertise on issues surrounding broadband.

Pennsylvania currently has no agency or commission with a broadband deployment and affordability mandate. The Commission already has the requisite experience when it comes to the deployment of networks and providing service at just and reasonable rates for basic public utility services like electricity, gas, transportation, voice, and water. That kind of expertise is needed regardless of what funding mechanism or entity will dispense state support to designated providers of broadband service.

It is worth noting, again, that Pennsylvania today has no regulatory authority expressly responsible for the deployment of broadband networks, although some states have such efforts, nor is there any focus on ensuring the delivery of reliable and affordable broadband services at just and reasonable rates. There is also no agency

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<sup>32</sup> 2020 *Joint State Government Report*, pp. 8-9.

responsible for ensuring that broadband is delivered at any speed greater than the outdated speed required under Chapter 30 even though faster speeds are critical to providing broadband-based education and health care.

The Commission may have demonstrated the technological, economic, and legal expertise when it comes to broadband. However, this has been on an ad hoc basis in response to identified broadband issues in Pennsylvania that go beyond Chapter 30.

The Commission simply has no legal mandate to advance broadband networks and ensure that there is reliable and affordable broadband service at just and reasonable rates in a manner that is consistent with, or otherwise advances, federal efforts. It certainly has no authority to ensure that the capital funding coming from an independent authority ensures that providers getting that money build broadband networks and provide services at just and reasonable rates. The Commission has no authority to ensure that providers continue to be able to operate networks and provide broadband service after the network and services supported from a public funding grant are no longer used and useful.

The Commission's legal authority is limited only to the "availability" of broadband under Chapter 30 within 10 days of a request for outdated broadband speeds. This mandate is devoid of any direct oversight for the reliability, quality of service, or affordability of that broadband. Moreover, there are proposals to jettison or severely restrict the authority that the Commission already exercises over voice service when it comes to reliability, quality of service, and affordability. There seems to be a move

toward increased oversight for broadband and reduced oversight for voice although both services rely on the same networks to provide their services.

One possible approach would be to declare broadband tantamount to a public utility service to the extent permitted by federal law and to accompany that with a mandate to ensure the affordability of broadband services in support of federal law. This approach would maximize the use of any funding provided by an independent authority from a line-item budget. It would also minimize legal challenges or preemption by federal regulators. This approach will likely be vigorously opposed -- particularly if funding is tied to a mandate that the provider-recipient has a universal service mandate and must be a certificated public utility who provides reliable service at just and reasonable rates.

I recognize that Commission oversight and public utility certification grew out of the traditional “public utility model” which presupposes monopoly power over the last mile. The broadband model today when it comes to the last mile is not a monopoly. It is a model characterized as a patchwork duopoly in the areas where there is overlap between telephone and cable companies. There are reduced mandates in those areas even when there is only one provider and still newer proposals to even reduce that authority.

Any effort to oversee broadband networks and ensure reliable service at just and reasonable rates is decried as “regulating the internet” by opponents. In fact, regulatory oversight to support a broadband network that provides reliable service at just and

reasonable rates is no more “regulating the internet” than the US Postal Service is “regulating the contents of the mail” when they set uniform standards and prices for the delivery of stamped mail.<sup>33</sup>

Moreover, the two providers in today’s patchwork duopoly model do not have the same legal mandates.<sup>34</sup> Cable providers are not classified as telecommunications common carriers under federal law. They have no mandate to provide access to competitors. They have no mandate to comply with any state universal service mandate to serve all consumers in their service territory. Any deployment or quality of service oversight is done by the local franchising entity.

Telephone companies are required to provide competitors’ access under federal law, but the FCC’s forbearance and preemption decisions have largely removed that mandate for fiber networks and, most recently, copper networks. The telephone companies have a state universal service mandate. They have a federal universal service mandate when they receive federal support. Telephone network reliability and quality of service are regulated by the Commission but there are proposals to reduce that authority.

Any “modified” common carrier public utility model approach, such as occurred when broadband was considered a Title II common carrier service but then reversed by

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<sup>33</sup> See, e.g., *Net Neutrality Testimony* at [http://www.puc.pa.gov/General/pdf/Testimony/BrownDutrieuille-HS\\_Dem\\_Comm-NetNeutrality010920.pdf](http://www.puc.pa.gov/General/pdf/Testimony/BrownDutrieuille-HS_Dem_Comm-NetNeutrality010920.pdf) (text) and [http://www.puc.pa.gov/General/pdf/Testimony/Chair\\_GBD-Net\\_Neut\\_Appx010920.pdf](http://www.puc.pa.gov/General/pdf/Testimony/Chair_GBD-Net_Neut_Appx010920.pdf) (appendices).

<sup>34</sup> *Net Neutrality Testimony*, pp. 10-11.

the FCC, will likely require funding and oversight. This will be needed so that broadband networks are built and that they provide reliable service at just and reasonable rates.

Efforts to do that are likely to be opposed by citing to robust competition. Today's market however is a duopoly market where the appearance of competition is often more apparent than real.<sup>35</sup> The appearance arises because cable has no mandate to facilitate competition and any competition that the telephone industry was required to facilitate has been severely restricted by the FCC. Competition is dwindling and increasingly limited to non-urban areas already challenged to maintain their networks let alone provide broadband services. There is likely to be considerable resistance to expanding the universal service revenue assessment base to fund broadband networks and affordable service at just and reasonable rates for broadband-based education and health care.

Reliance on an independent authority to provide funding for broadband with a line-item allocation for education and health care broadband raises two additional issues. The first concerns whether the provider should be certified as a public utility as a precondition to receiving state funding. Utility certification not only provides exemption from local zoning and access to needed rights of way, it is also accompanied with a universal service mandate tied to regulation which ensures that the provider will serve all

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<sup>35</sup> See e.g., Statement of Chairman Brown Dutrieuille, Proposed Rulemaking Order – Competitive Classification of Telecommunications Retail Services, Docket No. L-2018-3001391 (August 27, 2020) available at <http://www.puc.pa.gov/pdocs/1675029.pdf>.

consumers in their supported area as a matter of policy pricing. This may be preferable to serving only high-revenue consumers in the same area using a market pricing model.

Second, as I have indicated in prior testimony, there is a need to address depreciation, retained earnings, and shareholder distributions.<sup>36</sup> Regulatory oversight may be needed because, without adequate financial oversight to account for depreciation, retained earnings, and shareholder distributions, publicly funded networks will likely not have reserves when the funding period ends to sustain the network as the equipment becomes worn out and needs to be replaced. That will likely occur because a commercial entity will probably flow through revenues above costs to meet its fiduciary duty to maximize gain for shareholders without accounting for depreciation or retaining earnings which can make a network self-sustaining. The commercial entity will be reluctant to set aside earnings to account for depreciation or retained earnings because doing so may violate their fiduciary duty to maximize shareholder value. That will likely mean empty coffers at the end of the network's lifecycle and requests for more public funding.

I will briefly address the Commission's current webpage education efforts on broadband. As I stated earlier, the Commission has assisted PSU in developing additional maps showing what areas do not have broadband in Pennsylvania. The earlier PSU map only showed areas without broadband that were eligible for support within the

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<sup>36</sup> *Telehealth Testimony*, pp. 2-5, particularly p. 4 available at <http://www.puc.pa.gov/General/pdf/Testimony/BrownDutrieuille-Senate-RuralHealth090319.pdf>

ranges of the FCC auction. The latest PSU maps show what areas, within a county or our 500 public school districts, lack broadband today. These maps are far broader because they include that 50% of Pennsylvania's unserved areas that are not in the auction. These maps will also be posted on our webpage.

The Keep America Connected Pledge for voice and broadband has ended. The ongoing order of the Governor and the Commission retain the moratorium on voice service disconnection. The Commission's limited authority did not encompass the broadband termination moratorium in the now-expired Keep America Connected pledge.

The Broadband Bill of Rights was developed to educate the public about their rights to broadband under Chapter 30 at Chapter 30 speeds within 10 days of a request. Such a Bill of Rights could be modified to reflect any change in Pennsylvania law addressing the classification of broadband as a public utility service or additional obligations and consumer protections adopted in any new law.

The Lifeline Assistance Program is federal support only. Pennsylvania does not have a supplement to that support. That might be a matter of concern to the Committee given the fact that affordability is the number one impediment to broadband adoption. A recent New York City study showed that 40% of New York City residents do not have broadband at home despite the availability of broadband networks – a challenge likely facing Philadelphia and rural areas as well. Another study showed a \$4 return for every \$1 invested in rural broadband and that 75% of that return would benefit urban areas.

I thank you for the opportunity to provide this testimony and stand ready to answer any questions that you may have.