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**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

*Order Instituting Rulemaking
Regarding Broadband Infrastructure
Deployment and to Support Service
Providers in the State of California*

Rulemaking 20-09-001
(Filed September 10, 2020)

**COMMENTS OF NEXT CENTURY CITIES ON ASSIGNED
COMMISSIONER'S RULING**

September 2, 2021

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**COMMENTS OF NEXT CENTURY CITIES ON ASSIGNED
COMMISSIONER’S RULING**

I. Introduction.....3

II. Meaningful partnerships with communities can ensure that middle-mile networks are effectively developed and utilized.3

A. The Commission should work with communities to better understand residents’ capacity and affordability needs.4

B. The Commission should partner with communities to develop and maintain middle-mile maps.5

C. Collaboration with local officials and community leaders is necessary to harness the full benefits of a middle-mile network.6

III. Thoughtful planning can amplify success.....7

A. The Commission should develop a plan for last-mile connections.7

B. Connectivity remains a priority in urban *and* rural areas and on Tribal lands.8

C. Open-access policies should remain, even if parts of the network are sold.....9

IV. Conclusion10

I. Introduction

Next Century Cities (“NCC”) respectfully submits these comments in response to the California Public Utilities Commission (“CPUC” or “Commission”) on its role in implementing California’s open-access middle-mile network.¹

Local governments nationwide, including those among NCC’s 32 member municipalities in California, have been instrumental in deploying and maintaining broadband networks that improve public health and safety, enhance competition from private providers, and serve anchor institutions, businesses, and residents. Because local leaders are closely situated to the physical infrastructure and directly interact with the community members who will ultimately benefit from the undertaking, the Commission should solicit and rely on local expertise when developing California’s statewide middle-mile network.

Facilitating meaningful communication channels between state and local leaders, building upon existing institutional knowledge available from community initiatives, and adopting a holistic approach can help the Commission develop deployment policies that stand the test of time and make strides toward achieving California’s goal of achieving ubiquitous broadband access and adoption statewide.²

II. Meaningful partnerships with communities can ensure that middle-mile networks are effectively developed and utilized.

Open-access middle-mile networks help to foster competition, giving a variety of internet service providers access to statewide digital infrastructure. When designed and managed effectively, they lower barriers to entry for new market entrants, which increases service options for consumers, and can provide a wealth of benefits from every dollar invested into the network. Local and Tribal governments and community organizations are uniquely positioned to compound those benefits through thoughtful, collaborative planning.

¹ California Public Utilities Commission, Assigned Commissioner’s Ruling, Rulemaking 20-09-001 (Aug. 6, 2021), <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M397/K312/397312171.PDF>.

² See generally California Broadband Council, Broadband Action Plan 2020: California Broadband for All (Dec. 2020), <https://broadbandcouncil.ca.gov/wp-content/uploads/sites/68/2020/12/BB4All-Action-Plan-Final.pdf> (“Broadband Action Plan”).

Ensuring that the network serves not only commercial service providers, but also public entities, is critical to achieving the goal of statewide connectivity to high-speed, reliable Internet access. Community initiatives play a crucial role in confirming that California's middle-mile network provides tangible benefits to the millions of residents living without adequate broadband access.

A. The Commission should work with communities to better understand residents' capacity and affordability needs.

The Commission asks what sufficient capacity and affordable rates should be in the context of this network and seeks comment on the verification process.³ Local governments are uniquely positioned to work with the Commission to develop comprehensive maps and help determine what capacity and affordability needs their residents face.

Capacity and affordability needs vary widely by community; what works in one area may not work well in another. Furthermore, existing data fail to capture current broadband prices accurately. The lack of standard speed tiers and the asymmetrical nature of advertised prices further complicates this analysis.

There is broad consensus that 25/3 Mbps is an inadequate benchmark for broadband speed. Rightfully, Governor Newsom's Executive Order set a target speed of 100 Mbps for downloads.⁴ At least 100 Mbps upload speeds are equally critical to ensuring that every resident in the state has access to enough bandwidth to use the Internet without interruption. Multigenerational households, families with members living with disabilities, and homes using the Internet of Things to enhance their daily lives rely on increasingly fast upload speeds.

Though the Broadband Action Plan sets target upload speeds at 20 Mbps, in the coming years, as California's middle-mile network is underway, even those speeds will fall short of escalating demand.⁵ As the Plan states, funding benchmarks will continue to increase in the

³ Assigned Commissioner's Ruling, 4-5.

⁴ See Governor Gavin Newsom, Executive Order N-73-20 (Aug. 14, 2020), <https://www.gov.ca.gov/wp-content/uploads/2020/08/8.14.20-EO-N-73-20.pdf>.

⁵ Broadband Action Plan, 23.

coming years.⁶ Public funds should be invested in forward-looking infrastructure to ensure that networks are well-suited for future needs.

Furthermore, the technology is already available to provide 100 Mbps symmetrical speeds. Fiber-to-the-home networks across the country, including those that rely on open-access middle-mile networks, have provided Gigabit symmetrical speeds over the last decade. Several community networks, including Santa Monica City Net, now offer 10 and 100 Gigabit symmetrical services.⁷

B. The Commission should partner with communities to develop and maintain middle-mile maps.

The Commission seeks comment on whether recommended routes should be proposed, removed, or revised.⁸ Middle-mile routes directly impact local governments across the state, many of which may not have the capacity to file comments on current proposals. This proceeding alone should not be the only venue for communities to offer feedback and advice for the network's location.

Some communities have staff dedicated to broadband infrastructure and digital inclusion planning, while others do not. The Commission should support local governments by providing straightforward resources and recommendations for best practices that communities can use to help verify the accuracy of state infrastructure maps and collect information about residents' capacity and affordability needs.

Communities also serve an important role in providing accurate information about ongoing network maintenance and other service needs. Ongoing reporting and detailed mapping are critical to ensuring the state's middle-mile network is usable by those who do not have the resources or expertise to collect the information on their own.

⁶ *Id.*

⁷ See Santa Monica CityNet, Broadband, <https://www.smcitynet.com/>.

⁸ Assigned Commissioner's Ruling, 4-5.

Developing an ongoing partnership with local leaders can help the Commission better understand where network deployment will be most impactful and identify barriers that may arise as the project progresses.

C. Collaboration with local officials and community leaders is necessary to harness the full benefits of a middle-mile network.

Community networks across the country fill gaps in broadband infrastructure. Several municipalities have leveraged statewide open-access middle-mile networks as a vital connection point for municipal fiber-to-the-home services.

In 2008, the Commonwealth established the Massachusetts Broadband Institute (MBI) to ensure that all homes, businesses, and institutions had affordable, high-speed broadband access.⁹ In service of that goal, MBI invested in MassBroadband 123, a middle-mile fiber infrastructure that now connects over 120 communities.¹⁰ Completed in 2014, MassBroadband 123 currently provides backbone service to over a third of the geographic area of Massachusetts, at least 400,000 households and businesses, and exceeding one million residents.¹¹ Through thoughtful planning, MassBroadband 123 can serve as an example, and successes can be replicated in California.

MBI partners with municipalities, along with other stakeholders, to work toward bridging the digital divide. Communities like Leverett began partnering with MBI, early on in the development of its network.¹² Leverett residents provided support for the network through grassroots advocacy, which helped the program attain funding and garner public support.¹³ Because of this partnership, Leverett's fiber-to-the-home network construction was completed in 2015, a year after the state completed construction of its network, and residents can now

⁹ Massachusetts Broadband Institute, About MBI, <https://broadband.masstech.org/about-mbi>.

¹⁰ *Id.*

¹¹ Massachusetts Broadband Institute, MassBroadband 123 Network Construction, <https://broadband.masstech.org/about-mbi/past-programs/massbroadband-123-network-construction>.

¹² See Susan Crawford & Robyn Mohr, Bringing Municipal High-Speed Internet Access to Leverett, Massachusetts, at 11 (2013), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2366044.

¹³ See *id.*, 11.

subscribe to Gigabit Internet at a relatively low price through Leverett’s partner Internet Service Provider.¹⁴

MassBroadband 123 similarly saved the City of Alford from building fiber to the nearest connection point, 20 miles away, to support their municipal network.¹⁵ Whip City Fiber, a community network based 45 miles away in Westfield, supports AlfordLink.¹⁶ In both cities, residents who qualify for the Emergency Broadband Benefit can use the subsidy toward their Whip City service.

California’s middle-mile network can similarly support community broadband networks, which provide high-quality, relatively low-priced service for residents and businesses. Working with these communities beginning in the earliest planning stages allows for collaboration with the local leadership and improves the speed and efficiency in which homes and businesses are able to connect.

III. Thoughtful planning can amplify success.

Communities and states across the country have developed open-access networks. Those experiences can help inform the Commission’s planning process and reveal cost-saving efficiencies. Setting a contingency plan can also help offset any potential hurdles or pitfalls that may arise during network development.

A. The Commission should develop a plan for last-mile connections.

Though municipal broadband is well-suited for some communities, others are not equipped to provide last-mile connections, even if they manage a middle-mile network of their own. While middle-mile infrastructure is important, the Commission should develop a plan to ensure that every community can harness the network’s benefits. Communities that have established middle-mile networks can help inform the Commissions’ efforts.

¹⁴ MassBroadband 123 Network Construction; LeverettNet, *Internet Service Provider*, <https://lmlp.leverettnet.net/internet-services-provider-isp/>; LeverettNet, *Home*, <https://lmlp.leverettnet.net/>.

¹⁵ *See* If We Build It, Will They Come?, 4.

¹⁶ Whip City Fiber, *Alford*, <https://www.whipcityfiber.com/alford/>.

Nevada County, for instance, has faced challenges in ensuring that all California residents have a last-mile service offering in their area. Though a provider has offered middle-mile infrastructure for over a decade, no last-mile providers have developed connections to homes and businesses in the county.¹⁷ The County recommends a streamlined funding program to support last-mile connections and reduced regulatory barriers for smaller projects.¹⁸

The Commission should work with communities to identify areas that remain disconnected despite the presence of middle-mile infrastructure to develop a plan to build last-mile connections. As the state's middle-mile network is developed, ensuring that communities have the resources they need to support last-mile projects will remain critical.

B. Connectivity remains a priority in urban *and* rural areas and on Tribal lands.

Across the state, at least 8.4 million California residents do not have a home broadband subscription.¹⁹ Californians living in rural and urban areas alike, and those living on Tribal lands, are all impacted by broadband infrastructure gaps. While middle-mile solutions can address statewide disparities, planning must include strategies for connecting communities that face unique challenges to bringing broadband access and adoption within reach.

In states like New Mexico and Colorado, middle-mile networks have been effective solutions to boost connectivity on Tribal lands and in rural areas. Middle-mile networks have been similarly successful in majority urban areas like Medina County, Ohio, and South Bend, Indiana. At the same time, these differences create unique challenges to expanding connectivity. Building a strategy that recognizes those differences in the planning process can enable all Californians with the connectivity they need to get online.

¹⁷ See Nevada County's Public Comment on the Draft California Broadband State Action Plan (Nov. 18, 2020), https://www.google.com/url?q=https://broadbandcouncil.ca.gov/wp-content/uploads/sites/68/2020/11/nevada-county_11-18-2020.pdf&sa=D&source=editors&ust=1629307790328000&usg=AOvVaw3VXz7GiQ9eM2x6Cgw2ciFE

¹⁸ *Id.*

¹⁹ Broadband Action Plan, 8.

Several California cities have conducted digital equity studies and developed digital inclusion plans.²⁰ The results offered in these reports shed light on existing connectivity disparities, which can help inform the Commission’s overall efforts to develop a workable middle-mile network. Understanding the unique challenges in California communities that vary in need and topography is a critical step in developing policies to guide the state’s middle-mile expansion efforts.

Tribal governments are eligible for funding through the National Telecommunications and Information Administration’s Tribal Connectivity Grant program, which includes funding for middle-mile networks.²¹ The Commission should work with California’s 109 Tribal communities to seek synergies among connectivity projects. Communication and partnership are key to ensuring that concurrent deployment projects complement each other, bringing broadband service within reach for every household and business that remains disconnected.

Working together with Tribal and local governments is a necessary step to ensuring that middle-mile connectivity brings tangible benefits to communities of all sizes.

C. Open-access policies should remain, even if parts of the network are sold.

The Commission asks whether the state should purchase capacity from existing open access communications networks.²² Instead, the Commission should prepare a plan for the possibility that parts of the state’s publicly-built network may ultimately be sold, ensuring that open-access policies remain intact.

In some cases, publicly built open-access middle-mile network developments have been acquired by private providers.²³ If California’s network is ultimately sold to a private provider, the Commission should ensure that open-access policies remain in place.²⁴ This practice helps

²⁰ See e.g. Comments of Next Century Cities on Phase II-B Assigned Commissioners Ruling, 5-6 (July 2, 2021), <https://nextcenturycities.org/wp-content/uploads/2021.07.02-NCC-Comments-R.20-09-001-Phase-II-B.pdf>.

²¹ See press release, Department of Commerce’s NTIA Announces Nearly \$1 Billion in Funding to Expand Broadband on Tribal Land (June 3, 2021), <https://www.ntia.doc.gov/press-release/2021/department-commerce-s-ntia-announces-nearly-1-billion-funding-expand-broadband>.

²² Assigned Commissioner’s Ruling, 6.

²³ See If We Build It, Will They Come, Lessons from Open-Access Middle-Mile Networks, 10 (Dec. 2020), https://www.benton.org/sites/default/files/OAMM_networks.pdf.

²⁴ See If We Build It, Will They Come, Lessons from Open-Access Middle-Mile Networks, 10 (Dec. 2020), https://www.benton.org/sites/default/files/OAMM_networks.pdf.

provide clarity and confidence from last-mile providers who rely on the open nature of the network to serve communities, even if ownership changes hands.

For example, the pandemic revealed that fixed wireless and mesh networks are a crucial component of connectivity in hard-to-serve communities—urban, rural, and Tribal. At the same time, any networks developed on the state’s middle-mile network would be jeopardized if the network was purchased and the community was prevented from offering public wireless service.

In order to ensure long-term connectivity for the communities the network serves, the Commission should develop plans early on that guarantees that the network remains open-access in perpetuity.

IV. Conclusion

Partnering with California communities, the Commission can develop robust data to inform its processes and ensure that the state’s open-access middle-mile network is built by centering end-users’ needs.

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Respectfully submitted,

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