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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 08/06/2021)

**ADDITIONAL COMMENTS OF THE SAN DIEGO ASSOCIATION OF
GOVERNMENTS (SANDAG) ON THE ASSIGNED COMMISSIONER'S
RULING REGARDING BROADBAND INFRASTRUCTURE
DEPLOYMENT**

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I. Introduction

Pursuant to the September 9, 2021, *E-Mail Ruling Ordering Additional Comments as Part of Middle-Mile Data Collection*, the San Diego Association of Governments (SANDAG) submits these additional comments on the Assigned Commissioner’s Ruling Regarding Broadband Infrastructure Deployment and to Support Service Providers in the State of California (Rulemaking 20-09-001). Consistent with our opening comments, SANDAG recommends that the CPUC consider utilizing all regulatory tools at its disposal to ensure that state broadband infrastructure deployment efforts enable the Commission to increase competition, expand consumer choices, and provide reliable, high-affordable broadband service.

II. Response to Comments

To support the expansion for broadband infrastructure in the region and state, SANDAG respectfully submits the following comments to the seven additional questions identified in the

assigned commissioner's ruling. Comments are consistent with SANDAG's Regional Digital Equity Strategy¹ to expand broadband access and adoption in the San Diego region including:

- *Effective public – private partnerships*: Leverage best practice and lessons learned from public and private partnerships throughout the nation to effectively manage public and private interests, mitigate risk, and enable the state to accelerate the delivery of the network.
- *Strategic and coordinated regional deployment*: Many regional and local governments have complementary broadband infrastructure planning and deployment efforts underway that should be integrated into the CPUC's proposed network. Close collaboration with state and regional stakeholders such as Metropolitan Planning Organizations (MPOs), tribes, Caltrans, local jurisdictions, and ISPs is necessary to refine the locations of the middle-mile network to prioritize public investment in areas of greatest need.
- *Data-driven decision-making*: Develop user-focused policy objectives and performance measures to ensure middle-mile and last mile deployments provide high-quality, reliable, and affordable broadband services to unserved and underserved areas.

1. Open-Access:

In today's 21st century, broadband is a public good and an essential utility like water, electricity and transportation. As the regulatory agency, the CPUC should evaluate all possible strategies to oblige and ensure that access to affordable, reliable, and high-quality broadband to everyone is realized. This includes assigning performance measure, affordability, and data sharing requirements to ensure that open access, service performance, and affordability objectives are met. SANDAG recommends that the CPUC collaborate more closely with stakeholders such as MPOs, Regional Transportation Planning Agencies (RTPAs), Caltrans, local jurisdictions, tribal governments, and ISPs to develop data-driven, enforceable and measurable performance standards in perpetuity. Establishing clear and data-driven policy objectives upfront would enable the CPUC to manage private provider interests with strategic

¹ www.sandag.org/digitalequity

public investments to deliver broadband to populations in areas of greatest need. This would also ensure accountability and transparency to the public and last mile providers who may rely on the open nature of the network to serve communities.

2. Additional Factors to Consider:

Consistent with our opening comments, SANDAG encourages the CPUC to consider all of the factors listed in the ALJ's ruling. In addition, criteria that focuses on user-based outcomes such as service performance, will ensure the delivery of reliable, low latency, affordable, and equitable broadband standards.

3. Middle-Mile Network Services for ISPs:

There are clear gaps in fiber infrastructure in the County of San Diego that public investment in the open-access statewide middle-mile network could fill. The CPUC should consider leveraging public infrastructure beyond the state highway system like County and tribal roads, transit and rail right of ways, and public utility right of way projects to maximize use of public funds in areas of greatest need. As mentioned in the opening comments, the Commission's "Anchor Build Fiber Highways" omits the state's first dig once demonstration project along SR 67, as well as several key corridors in San Diego County such as segments SR 78, SR 79, and SR 76 that could provide critical broadband connections to tribes and rural communities like the La Jolla Reservation and Los Coyotes Reservation in addition to unincorporated communities like Warner Springs, Ranchita, and Borrego Springs. SANDAG is currently working with Caltrans, the County of San Diego, and SDG&E to identify other local roads and utility projects that could be used to provide middle mile connections. The CPUC should consider leveraging local roads or other opportunities that could serve as strategic connections to the network in addition to the state highway system. Making the final determination of the middle-mile network locations without adequate consultation with key stakeholders like Caltrans, County Transportation Commissions, County Schools and Libraries, Metropolitan Planning Organizations, Local Jurisdictions, Tribal governments, as well as the California State Parks is premature and may not produce a network that serves the areas that are most impacted by the digital divide.

In addition, the middle-mile location identification process could be augmented with granular data from ISPs to further refine the network locations. The CPUC should consider acquiring network location information from ISPs to design a middle-mile network that is open but not duplicative of existing ISP middle mile networks. Where the private ISPs have existing middle

mile infrastructure, the CPUC should consider requiring that excess capacity, spare conduit, dark fiber, or bandwidth on the middle mile be made available for lease to ISPs at rates comparable to the state open access middle mile network lease rates. The CPUC should consider leveraging private middle mile conduit or unused fiber in census blocks that are underserved or unserved by 100/20 Mbps today and requiring private owners to publish lease rates for the spare capacity to the CPUC. This kind of strategic deployment would target public investments where infrastructure is truly lacking, maximize available public funds, and support cost-effective last mile deployment.

Establishing a middle mile clearinghouse may enable the CPUC to oversee and regulate fair and competitive pricing to ensure objectives are maintained. This information could also be leveraged by the state's middle mile administrator to evaluate areas where it may be necessary to use public resources to deploy new conduit or dark fiber versus leveraging existing private or public infrastructure. As indicated by the California Emerging Technology Fund (CETF) in their opening comments, the CPUC should develop competitive and affordable rates for open-access statewide middle mile infrastructure. An average baseline affordable rate could be used as a standard benchmark for public-private partnerships to deploy last mile infrastructure. SANDAG supports CETF's recommendation and encourages the CPUC to develop these rates in a fair and transparent manner that serve the public's interest and objectives of SB 156.

It is also critical that middle mile public investments be designed to be "future proof." While the state has established a new broadband threshold of 100 Mbps/20 Mbps, SANDAG encourages the CPUC to be forward-thinking and design a network that can meet current and future demand. At minimum, the middle mile network should be designed to provide 1 Gbps service to each household or 10 Gbps for larger services such as businesses, public facilities, healthcare facilities, libraries, and schools. The Commission may also want to consider new demand generated by the open access middle-mile network such as new digital businesses that may be established as a result of the provision of service in currently underserved rural or tribal areas. Establishing demand based on bandwidth and quality of service, including upstream and low latency, may address evolving uses and applications of broadband. This effort should also include complementary middle mile investments with excess dark fiber and extra conduits to maximize the benefit of the investment in trenching and ensuring the public investment remains resilient and sustainable well into the future. Though wireless technology remains a

viable option, particularly for last mile broadband delivery, the middle mile must serve aggregate bandwidth needs, and wireless backhaul today remains inadequate for most communities.

As mentioned in our opening comments, SANDAG is partnering with Caltrans and the County of San Diego to integrate fiber infrastructure along 18 miles of the SR 67 corridor. As part of the project scope, the public agency partners are funding multiple conduits that can be used to pull fiber to serve Caltrans and County communication needs. This also includes the provision of extra vacant conduits that can be leveraged by a public agency partner or ISP to pull fiber for broadband service to serve current and future needs. Consistent with our earlier response, SANDAG urges the Commission to employ a similar approach so that potential future expansions can be readily accommodated without a significant additional investment in public funding. Based on our experience, SANDAG recommends that empty conduit banks be sized to account for the largest count fiber strand required to serve the communities and provide a minimum of four ducts of the same size, no smaller than 1.5-inch inner diameter. Providing additional conduit within each route would enable the Commission, ISPs, or other agencies to seamlessly connect to the middle-mile network, future-proof the system, and create resiliency in the network.

4. Middle Mile Network Services for Consumers

Providing high-quality broadband services that serve anchor institutions throughout the state is critical. In areas where there are gaps and anchor institutions are underserved with less than 1 Gbps of broadband service, the middle mile fiber network should be used to deliver backbone service to the anchor institutions. The CPUC should also consider revisiting rules that prevent the use of the broadband network deployed by CENIC to rural anchor institutions as an open access middle mile. By utilizing the existing CENIC network for leasing extra conduit, dark fiber or bandwidth to ISPs, new investments in middle mile can be directed in regions where no middle mile exists. Additionally, the Commission should consider all environmental constraints when planning, designing, and deploying broadband infrastructure. This may include, but are not limited to, biological and cultural resources, protected wetlands, seismic and high-fire risk areas.

5. Last Mile Providers

Investments in the middle mile network encourage ISPs to enter new markets and deliver affordable and reliable last mile service one community at a time – especially when there is not a sufficient business case. Middle mile is precisely the investment that is needed to encourage

competitive last mile providers to deploy service in rural, backcountry and tribal areas. For example, auction winners from the FCC's Rural Digital Opportunity Fund (RDOF)² program could leverage the statewide open access middle mile to deliver affordable broadband in unserved and underserved census blocks. Where private providers do not deliver service, various cooperatives, non-profit organizations, or public agencies could also elect to leverage the open access middle mile network to deliver broadband services to residents. Design of the middle mile network should be designed to accommodate participation from private, public or non-private ISPs to ensure objectives set forth by SB 156 are accomplished.

6. Other States

A successful open-access, middle-mile network requires a sound financial and feasibility plan, with an eye on existing resources, and a time horizon that allows for long-term success. Careful planning, including early recognition of foreseeable risks, helps boost success. Open-access requirements must also be monitored and evaluated on an ongoing basis to ensure public and private partners are held accountable. The CPUC should actively seek best practices and innovative approaches to realize the objectives of the open-access network. Local and regional leaders in addressing the digital divide and broadband deployment such as MPOs, RTPAs broadband consortia, tribal contributors, ISPs, and local jurisdictions should be pivotal contributors. The CPUC should also consider success stories in other states throughout the United States³. Rural electric cooperatives in North Dakota deliver high speed internet over 50,000 square miles to more than three quarters of rural North Dakotans, compared to only twenty percent of rural residents nationally. Existing public infrastructure can also be leveraged to identify gaps in middle mile while strategically allocating public resources like SANDAG is doing with Caltrans and the County of San Diego along SR-67. Project THOR, a 400-mile network in Colorado, was able to deliver a network by utilizing existing commercial and public fiber deployments, much of which are owned by the Colorado Department of Transportation. The CPUC should weigh these best practices and success stories with lessons learned from many of these deployments. For example, Connect Arlington in Virginia developed terms and risk management strategies that were too conservative, making partnerships with ISPs difficult to deliver.

² <https://www.fcc.gov/auction/904>

³ https://www.benton.org/sites/default/files/OAMM_networks.pdf

7. Other Issues Not Covered

As the CPUC continues to develop the statewide middle mile network, SANDAG encourages the Commission to consider funding broadband infrastructure deployment opportunities as part of major capital projects delivered by public agencies like MPOs, regional governments, utility companies, and transportation agencies. SANDAG, Caltrans and the County of San Diego are in the process of demonstrating a “dig once” partnership that will add middle mile fiber to a roadway rehabilitation project along an 18 mile stretch of State Route 67 in San Diego County. These kinds of strategic partnerships are a key strategy in helping the state maximize public investments to implement the objectives of SB156.

III. Conclusions

SANDAG thanks the Commission for consideration of these comments and looks forward to the partnership with the Commission and other stakeholders to support the expansion of the open access middle-mile network. Building collaborative and transparent partnerships with public and private stakeholders is critical to the vision outlined in the State’s Broadband Action Plan. SANDAG is committed to expanding broadband service to the region’s unserved and underserved areas. We encourage the Commission to ensure there continue to be adequate opportunities for coordination with regional governments like SANDAG, broadband consortia, and local jurisdictions to maximize our public investments and meet mutual objectives to bridge the digital divide.

Dated: September 30, 2021

Respectfully submitted,

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