



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

FILED

10/01/21
04:59 PM

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

Rulemaking No. 20-09-001

**COMMENTS OF THE CENTRAL COAST BROADBAND CONSORTIUM IN
RESPONSE TO THE ADMINISTRATIVE LAW JUDGE'S EMAIL RULING ORDERING
ADDITIONAL COMMENTS AS PART OF MIDDLE-MILE DATA COLLECTION
ISSUED SEPTEMBER 9, 2021**

Stephen A. Blum
Executive Team Member
Central Coast Broadband Consortium
3138 Lake Drive
Marina, California 93933
+1-831-582-0700
steveblum@tellusventure.com

1 October 2021

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

Order Instituting Rulemaking		
Regarding Broadband Infrastructure		Rulemaking No. 20-09-001
Deployment and to Support Service		
Providers in the State of California		

**COMMENTS OF THE CENTRAL COAST BROADBAND CONSORTIUM IN
RESPONSE TO THE ADMINISTRATIVE LAW JUDGE'S EMAIL RULING ORDERING
ADDITIONAL COMMENTS AS PART OF MIDDLE-MILE DATA COLLECTION
ISSUED SEPTEMBER 9, 2021**

I. Introduction

Per California Public Utilities Commission (CPUC) Resolution T-17529, the Central Coast Broadband Consortium (CCBC) is the California Advanced Services Fund (CASF) consortia grant recipient representing Monterey, San Benito and Santa Cruz Counties. The CCBC is a party to Rulemaking 20-09-001 and respectfully submits these comments in response to the Administrative Law Judge's Email Ruling, dated 9 September 2021 regarding middle mile network policy and to the questions therein.

II. General Comments Regarding Middle-Mile Network

As noted in previous comments in this proceeding, the CCBC is in favor of the plan to build an open-access middle-mile network throughout the State of California. On the Central Coast we have already experienced a successful deployment of a middle-mile network from Santa Cruz to Soledad (also referred to as “Sunesys fiber network”). Further extension of this

Sunesys network as well as expansion to areas that are not currently covered by its reach are essential to providing broadband access to underserved and unserved parts of our community.

We would like to reiterate that the key to success in a statewide middle-mile network is open access dark fiber. Middle-mile routes are currently available in our region as well as other regions, but privately owned fiber is not leased to all Internet service providers (ISPs). These private middle-mile networks can potentially be leveraged to serve areas of the state; the State will need to negotiate or impose appropriate rates for leasing this dark fiber from these private entities to make it an element of the overall plan.

III. Issues for Public Comment

In response to specific questions posed by the Administrative Law Judge in this ruling, CCBC offers the following comments.

1. Open-Access: As described in more detail in the Order Instituting Rulemaking that initiated this proceeding, the Commission has regulatory authority telecommunications service providers.

- *How can the Commission use its regulatory authority to assure durable and enforceable open-access and affordability requirements in perpetuity?*

Regulation of publicly funded infrastructure will be helpful. In the past, there have been issues of funds being vacuumed up by existing infrastructure and not used for needed expansion and improvements.

Regulations that enforce quality of service standards, require transparency, set reasonable prices, establish hard deadlines for responding to service requests and implementing such, and lay out avenues (such as ombudsmen) for accountability will help prevent unintended effects.

- *Should the Commission adopt a tariffing requirement for open-access networks?*

Yes, in all cases. The rates must be reviewed and approved by the Commission in an open and transparent manner, and should balance business viability and network accessibility. Rates should directly reflect the value of public subsidies and further the public policy goals that justify those subsidies. The Commission should consider tariff tiers that are tailored to improve service for underserved and unserved areas. The Commission should not allow owners or operators of publicly funded networks to set rates or pursue business practices that create barriers to entry by competitive last mile ISPs.

- *In October 2020, the Federal Communications Commission (FCC) eliminated a number of network unbundling and resale requirements placed on Incumbent Local Exchange Carriers, including requirements for DS1 and DS3 loops, and dark fiber transport provisioned from wire centers within a half-mile of competitive fiber networks. (See In the Matter of Modernizing Unbundling and Resale Requirements in an Era of Next-Generation Networks and Services, WC Docket No. 19-308, FCC 20-152) How will this impact Competitive Local Exchange Carriers in California that currently utilize these services to provide telecommunications services, including last-mile broadband Internet access service?*

These actions by the FCC will impact customers that use unbundled loops for subscribers to competitive DSL services.

Not mentioned in the text above, the FCC 20-152 also eliminates unbundled DS0 loops that are used by independent ISPs (e.g. Sonic) to provide competitive DSL services. Unbundled DS1 and DS3 services are important to some. Independent ISPs may use such facilities to connect DSLAMs in neighboring wire centers, and should be allowed to use inter-wirecenter dark fiber for such purposes.

2. Additional Factors to Consider: What additional criteria should the Staff Report take into consideration and to what extent, including, but not limited to:

- *Affordability;*

Rates for broadband services on subsidized open access networks in rural areas should be comparable to urban rates in all cases and consideration should be given to incentivizing expansion of last mile service – by

independent, competitive ISPs as well as incumbents which pursue monopoly/duopoly business models – in under and unserved areas. At a minimum, subsidies should offset construction cost differences in low population density areas; rates, terms and response times should be set accordingly by the Commission.

- *Redlining;*

The Commission should not allow specious arguments regarding overbuilding of networks (a pejorative term for market competition employed by incumbent ISPs to protect monopoly/duopoly business models) to block independent service in communities that have been bypassed or otherwise exploited by incumbent ISPs which engage in redlining practices.

- *Route redundancy;*

Where feasible, route redundancy is valuable for purposes of resiliency and fostering competition. Judiciously determined route redundancy combined with open access to the network will maximize the value of the State's investment.

- *Competition;*

Competition is essential to maintain quality, price, and innovation in a deregulated industry. Establishing an open middle-mile network will create a last mile environment similar to the early internet of the 1990s, when competition and innovation flourished. Our part of the country excels at innovation, and will benefit from the opportunity.

- *Hardening, undergrounding, deployment in high fire threat areas;*

Generally undergrounding is considered preferable, but due to the high cost, pole mounting will be required on certain segments of this network and should be employed as necessary. Undergrounding is most useful in high population density areas. When electrical lines are placed underground it also makes sense to move communications lines at the same time.

Broken communications lines do not usually cause wildfires. While there is a generalized belief that underground lines are more robust than pole

mounted equivalents, rulemaking in that regard should be based on evidence and not impressions or opinions. Such evidence should include a cost/benefit analysis that considers many factors, including costs related to network access and ongoing maintenance.

- *Cell coverage; and*

Cellular carriers should be welcomed as customers for open access fiber networks.

- *Labor and economic development benefits.*

This network will spur growth throughout the State and increase jobs, both directly and indirectly.

One only has to look at the boom created by the internet in decades past to foresee what will happen when more and better internet is available to all citizens, in business, education, and other sectors.

3. Middle-Mile Network Services for ISPs: The statute mandates that the State of California take into consideration various aspects that will increase the attractiveness and usefulness of the statewide open-access middle-mile broadband network for commercial internet service providers.

- *What specific locations, routes, interconnection points, regeneration points, and tie-ins should the Commission consider in order to increase the attractiveness and usefulness of the statewide open-access middle-mile broadband network for commercial internet service providers?*

The Commission needs to have an ongoing conversation with ISPs and local entities, including regional broadband consortia, during the planning process.

The initial, conceptual design for the middle mile network is based on the state highway system, which meets a top level goal of creating a statewide network. However, to create a network that is accessible at a reasonable cost and generally useful to local users, consideration should be given to route variations that pass directly through developed areas, including particularly commercial and industrial districts. At a minimum, preference should be given to following business routes assigned to state highways, as approved by the California Department of Transportation (Caltrans) and the American

Association of State Highway and Transportation Officials, regardless of whether or not those routes are maintained by Caltrans.

Ideal interconnections are at carrier neutral data centers – hardened facilities with redundant power that host major ISPs and have facilities to host interconnection equipment. Examples are 1 Wilshire in Los Angeles, 1380 Kifer Rd. in Sunnyvale, and 529 Bryant St. in Palo Alto. City, county and other municipality data center locations may be included. Independent ISPs, educational institutions and other large entities could be viable partners for this kind of siting too.

- *How can existing interconnection points or the creation of new interconnection points improve access for communities?*

Working with ISPs during early planning to locate interconnections at suitable points will help later, when creating last-mile networks.

We request that you add a feedback cycle on the design process, rather than a single “speak now or forever hold your peace” comment process.

- *What technical performance characteristics will increase the attractiveness and usefulness of the statewide open-access middle-mile broadband network for commercial internet service providers?*

The middle-mile network should focus exclusively on middle mile, dark fiber access rather than last-mile access, or managed or otherwise provisioned telecommunications services.

The CCBC defers to CENIC as the network operator to select the fiber type for the middle mile network. G.652 (SMF) and G.655 (LEAF) are both candidates. It would be best to select one rather than build a hybrid network.

- *What network design and other design, technical, business, and operational considerations will increase the attractiveness and usefulness of the statewide open-access middle-mile broadband network for commercial Internet service providers?*

Middle-mile providers should not compete with last-mile providers. To avoid price undercutting, middle-mile operators should only offer

wholesale service at a wholesale price. Retail, last mile service providers should compete to serve anchor institutions.

Although some policy documents may define last mile services provided to anchor institutions as middle mile service, such service rarely meets the functional definition of middle mile service: wholesale, direct, high capacity connections between major Internet nodes and last mile, retail service providers.

A state provided middle mile network should only reach as far as is necessary to provide commercially feasible middle mile connectivity to public or private sector last mile providers.

- *What services should the network provide commercial providers (e.g., dark fiber, lit fiber, colocation, wireless backhaul, etc.)?*

Node-to-node dark fiber only.

- *If the network offers dark fiber, how many strands of dark fiber should the network make available on each route? What should the lease terms be?*

As many strands as is feasible should be deployed. 144 strands should be considered an absolute minimum (for rural areas); 288 strands or higher is preferred. The overall cost increase of fiber strand count is such a fractional cost of the project that it makes it worthwhile to build in higher capacity at the start.

4. Middle Mile Network Services for Consumers

- *The middle mile network must prioritize connections to anchor institutions that lack sufficient high-bandwidth connections. Should the statewide middle mile network provide direct service to anchor institutions?*

No. These customers are important to the existence and growth of competitive ISPs and to the communities they compete to serve. Subsidized middle-mile providers should not supplant last-mile providers. The middle mile network should be designed in such a way that last mile service to anchor institutions that lack sufficient high-band-width connections becomes commercially feasible at competitive rates, which

has the added and necessary advantage of making high-bandwidth connections available to the entire community at competitive rates. There may be cases where there is no ISP available to provide last mile services, however the proper solution is to create a separate last mile provider of last resort that operates at arms length from the middle mile provider.

- *Should the middle-mile network directly provide broadband Internet access service, voice service, etc.?*

No. The middle mile network should only offer node to node dark fiber leases, and nothing else.

- *The Commission's 72-hour backup power requirements apply to all facilities-based wireline and wireless communications service providers that provide service in Tier 2 and Tier 3 High Fire Threat Districts. Should the Commission consider additional requirements?*

Not for this project.

5. Last-Mile Providers: The middle-mile network must enable last-mile connections.

- *How can the middle-mile network enable last mile connections in unserved, underserved and served areas of the state?*

The middle-mile network must be affordable and offer route choice for ISPs to build to these areas. Grants specific to rural areas will be valuable in bridging project viability. We also feel that it is important to build to third party towers to which wireless ISPs can connect. In this context, third party towers may be considered in the same way as Internet nodes.

- *How can the middle mile network assist the operation and development of public broadband networks? Are there opportunities to aggregate network monitoring, provide a managed voice service, security services, call center, and other back-office services among public networks?*

This is an opportunity that is worth investigating, but doesn't fit into the general scope of this project. For this purpose, we suggest that the State focus exclusively on an open access, middle-mile dark fiber network.

6. Other States: Numerous other states operate open-access networks, including but not limited to Illinois, Kentucky, Massachusetts, Michigan, Missouri, North Carolina, Ohio, Virginia, and Washington.

- *Are there any successes or pitfalls the State of California should take into consideration from other statewide open-access networks or even from other countries?*

Internationally, the most successful and prevalent model involves an open access, wholesale network that is either government owned or, more commonly, owned by a corporation which was spun out of a legacy agency with the government maintaining an ownership or other controlling interest. Switzerland, Britain and New Zealand are examples.

7. Other Issues Not Covered

Are there any issues the State of California should take into consideration as it develops the statewide middle mile network?

Again we urge the State to keep a constant dialogue with the regions when designing and building this network to ensure that this network is structured to provide access to areas that are uncovered.

IV. Closing

The CCBC greatly appreciates the work that Commissioner Guzman Aceves, Administrative Law Judge Glegola and other CPUC Staff have put into this proceeding. We respectfully request consideration of the above comments.

Date: 1 October 2021

Respectfully Submitted,

Stephen A. Blum

/s/ Stephen A. Blum

By: Stephen A. Blum

Executive Team Member
Central Coast Broadband Consortium
3138 Lake Drive
Marina, California 93933
+1-831-582-0700
steveblum@tellusventure.com