



FILED
09/03/21
04:59 PM

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

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

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

**OPENING COMMENTS OF THE CONNECTED CAPITAL AREA
BROADBAND CONSORTIUM**

David Espinoza
CCABC Manager
Connected Capital Area Broadband Consortium
Valley Vision
3400 3rd Ave
Sacramento, CA 95817
Tel: 404-952-8401

September 3, 2021

E-mail: david.espinoza@valleyvision.org

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

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

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

**OPENING COMMENTS OF THE CONNECTED CAPITAL AREA
BROADBAND CONSORTIUM**

I. Introduction

In response to the August 6, 2021 Assigned Commissioner’s Ruling (“Ruling”) requesting comments to inform locations for the statewide open-access middle mile network, and to the questions on the network deployment including existing infrastructure, priority areas, affordability, leasing, interconnection and network capacity, the Connected Capital Area Broadband Consortium (CCABC) submits these comments.

II. Opening Comments

The Connected Capital Area Broadband Consortium (CCABC), as coordinating organization for supporting expansion of broadband infrastructure and services in four counties (Sacramento, Sutter, Yolo and Yuba) in the Capital Region, worked in partnership with the Sacramento Area Council of Governments (SACOG) to reach out to jurisdictions (counties, cities, towns) in the Region and to gather their input on the middle mile network locations. The following comments compile responses provided by different jurisdictions including Yolo County (Chief Technology Officer), Yuba County (Planning Department, Project Manager of Broadband), and the City of West Sacramento (Deputy City Manager). The comments also include input from the report *Preferred Scenarios for Unserved Households in the CCABC Region*.

Identifying Existing Middle Mile Infrastructure

Q. What routes, if any, should be modified, removed from consideration, or revised?

Provide an explanation for these suggestions.

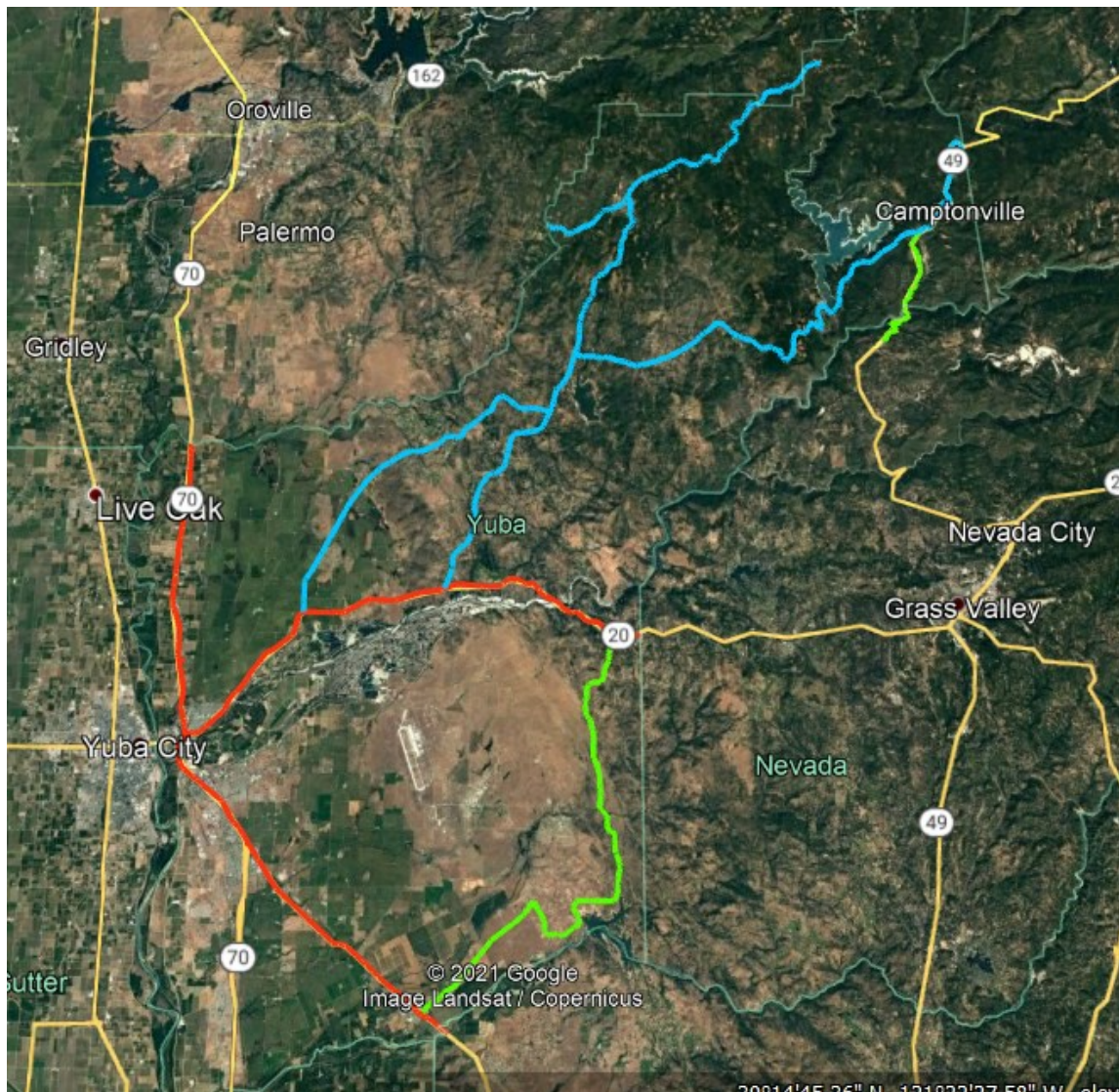
A. Yolo County: The proposed middle mile network does not include the most western part of Yolo County. In this part of the County, there is a great need for improved broadband in the Capay Valley communities along Highway 16. The proposed middle mile network route ends in Esparto. The network should continue along the Capay Valley. Community residents and the Yocha Dehe Wintun Nation are in need of accessible and affordable middle mile infrastructure.

A. Yuba County: The figure below presents 1) the proposed CPUC middle-mile network (in red), 2) our initial pass at proposed new middle-mile (in blue), and 3) additional areas (in green) noted by the Yuba County Leadership team. Generally speaking, the proposed CPUC middle-mile network is insufficient to meet the future needs for broadband access to the following Census Designated Places in Yuba County: Smartsville, Loma Rica, Dobbins, Challenge-Brownsville and Camptonville.

A. City of West Sacramento: Telecommunication companies have an incentive to over-report high speed Internet connectivity to avoid competition from the State; therefore, the use of multiple sources of independently verifiable data to augment company supplied data would be ideal. We believe the CPUC map substantially under-counts under-served residents in our community. We base that on ESRI data, which shows approximately 3,000 adults with no Internet access. Obviously the CPUC data is expressed in households, not adults, but it shows only a few hundred HHs. Perhaps the discrepancy lies with the ESRI data, which may be from the same source as the CPUC data, or in our calculation. Nonetheless, we believe that number deserves a second look.

A. CCABC: The CCABC generated the report *Preferred Scenarios for Unserved Households in the CCABC Region*. The CCABC reached out to the four counties and generated the following list of unserved priority areas: Courtland, Elk Grove, Freeport, Fruitridge Pocket/South Oak Park, Garden Highway area/Metro Air Park, Herald, Hood, Isleton, McClellan, Rancho Cordova, Rio Vista, Walnut Grove, and Wilton, in the County of Sacramento; East Nicolaus/Trowbridge, Sutter, Sutter Pointe, and South of Yuba City, in the County of Sutter; Binning, Capay, Clarksburg, County Airport surrounding homes, Guinda, Monument Hills/Wild Wings/Willow

Oak, Rumsey, Yolo and Zamora, in Yolo County; and Brownsville, Dobbins and Wheatland in Yuba County. The CCABC recommends that the middle mile network should pass by or nearby these communities (in addition to the areas listed by Yolo and Yuba Counties responses above) in order to ensure future last mile network deployments will reach these unserved priority communities. Additionally, the middle mile network should include the routes defined in the Strategic Broadband Corridors, which were selected based on a collaborative work with SACOG and local jurisdictions in the Capital Region.



Q. Are there existing middle mile routes that are open access, with sufficient capacity, and at affordable rates on the county highway routes listed in Attachment A?

A. Yuba County: These conditions are not sufficiently present within Yuba County.

Q. In the context of these comments, what is sufficient capacity and affordable rates?

A. Yolo County: Yolo County supports the 100 Mbps downstream standard for households. Sufficient capacity for middle mile network should be able to handle aggregated broadband data traffic from 1) internet service for all unserved households, and also 2) internet service for areas critical for economic development and community services including but not limited to agricultural areas, farm fields, community anchor institutions (i.e. education, healthcare), emergency response sites, fairgrounds, among others. Affordable rates should translate into affordable last-mile services for residential, business and anchor institutions; these rates should be comparable to the ones offered in more competitive markets (i.e., urban). Based on current internet service market pricing, rural users are penalized with more expensive residential rates, and last mile ISPs face more expensive interconnection rates, in some cases calculated by the mile distance to data centers. Yolo County supports the deployment of the open access statewide middle mile network.

A. Yuba County: Sufficient capacity would be the deployment of middle-mile infrastructure that enables for the full participation of each person in Yuba County at speeds of at least 100 mbps up/20 mbps. Officially reported data indicates that at least 6,021 residents are unserved at this speed, but Yuba County Leadership is not convinced this data is accurate and suspects the true unserved population is much higher.

Q. For routes that are identified as being open access, with sufficient capacity, and at affordable rates, how should the Commission verify these claims (e.g., should Communications Division send a data request for service term sheets, rates, approximate dark fiber, lit fiber, and conduit capacity, etc.)? Are there any other criteria that should be used to verify these claims?

A. Yolo County: In favor of verifying open access, sufficient capacity, and affordable rates claims.

A. Yuba County: Yuba County would welcome these verification methods, but would also request that public engagement occurs of served and unserved households such that the CPUC is

able to evaluate actual speeds provided by local broadband providers, as opposed to speeds advertised and reported by the broadband providers.

Priority Areas

Q. Is it reasonable to assume counties with a disproportionately high number of unserved households (e.g., 50% or more unserved at 100 Mbps download) are areas with insufficient middle-mile network access?

A. Yolo County: There are many areas that do not have service at these rates. For example, the Capay Valley. There are local last mile providers that could serve this region but the pricing of connecting to middle mile is a barrier.

A. Yuba County: Almost the entire area of Yuba County north of Highway 20 is unserved at 100 Mbps download, with the exception of education institutions served by CENIC.

A. City of West Sacramento: Self-reported data from telecommunications providers should be cross-referenced with demographic and other data to help assure that the right households would be served by improved middle mile deployment. We believe the unit of analysis should be Census tracts, or better yet, Census block groups, to avoid obscuring under-served populations within geographies that also include fully-served populations.

A. CCABC: Aggregating unserved households at County level might not reflect and help to identify high priority areas for middle mile deployment. CCABC recommends more geographical size granularity, and including Census Tract or Census Block Group size units. The four counties of the CCABC Region have broadband availability higher than 50% of households (from 76% to 96%) at the County level, however, there are many unserved areas in need of middle mile deployments.

Q. What other indicators, if any, should the Commission use to identify priority statewide open-access middle-mile broadband network locations (i.e., built expeditiously, areas with no known middle-mile network access, regions underserved by middle-mile networks, regions without sufficient capacity to meet future middle-mile needs)?

A. Yolo County: Supports the indicators listed above, being the most important areas with no know middle mile available.

A. Yuba County: It is the preference of Yuba County Leadership for the Commission to consider expanding middle-mile broadband infrastructure to all areas within Yuba County underserved by middle-mile networks. This includes the CPUC proposed middle-mile along Highway 20, but also Loma Rica Road, Marysville Road, Willow Glen Road, La Porte Road (to the Western county border and to the Northeast county border), Highway 49 (from Southern county border near Yuba River to Eastern county border near Oak Valley), as well as connecting the CPUC proposed route through the City of Wheatland to Main Street which becomes Spenceville Road-Camp Far West Road-Spenceville Road-Waldo Road-Chuck Yeager Road-Smartsville Road-Chuck Yeager Road-Smartsville Road-Chuck Yeager Road-Hammonton-Smartsville Road-to connect to Highway 20 on the proposed CPUC route.

Assessing the Affordability of Middle Mile Infrastructure

Q. What are existing providers paying or charging for middle mile services?

Q. Are there other factors or sources of information the Commission should consider for determining whether these services are affordable?

Q. Is it reasonable for the costs of these services to change depending on the location where the service is provided (i.e., rural vs urban)?

A. Yolo County: The pricing of middle mile services should be competitive and comparable to the ones in urban areas.

A. Yuba County: It is desirable for middle-mile rates charged to local broadband providers in Yuba County to remain as low as possible to ensure that costs are not passed on to broadband subscribers.

A. City of West Sacramento: Affordability of any product is always relative to the consumer's income. Therefore, there is no single "affordable" cost for Internet. In the housing field, affordability is calculated as a percentage of gross income. A similar calculation, along with demographic data, would militate in the direction of an equitable pricing structure for Internet connectivity. The cost of these services, at least for lower-income households, should be based on income, not location.

Leasing Existing Infrastructure

Q. If there is existing open access communications infrastructure with sufficient capacity to meet the state's needs, should the state purchase IRUs from that network?

A. Yuba County: No, according to local broadband providers the majority of the existing middle-mile capacity is at capacity.

Q. Is there any value in the state purchasing an IRU from the network if capacity is already available?

A. Yolo County: If the funding is available, it is preferable to build the network instead of leasing capacity.

A. City of West Sacramento: If an IRU protects the state from price gouging and other profit-motivated changes from middle mile carriers, then it may make sense to lease network capacity rather than building new capacity. However, in the absence of ironclad contractual language, over-dependence on this approach could leave the state vulnerable to future changes demanded by the middle mile carriers (e.g. claims of increased operating costs, etc.).

Q. If the state relies on IRUs for the development of the statewide network, will the generational investment that this funding provides be diminished when the IRU leases end 20 to 30 years later? Will existing networks run out of spare capacity?

Interconnection

Q. At what points should the statewide network interconnect (e.g., to other networks, servers, etc.)?

Q. Are additional exchange points necessary or strategic, and if so, where?

A. Yolo County: It is preferred to have a regional interconnection point, and also an interconnection point in Yolo County. The growth of internet usage by residential, business, commercial, and anchor institution users in the next few years will lead to exponential traffic growth. Local interconnection points will ensure providing a satisfactory internet user experience.

A. Yuba County: It is desirable for as many interconnection points in Yuba County to be deployed as is feasible, to encourage current and future competition that has the effect of enabling the lowest rates to broadband subscribers and sufficient competition between current and future broadband providers.

A. City of West Sacramento: The network should be widely distributed and built with redundancies in order to be resilient to natural disasters, etc.

Network Route Capacity

Q. How many strands of fiber should the network deploy for each route?

A. Yolo County: Sufficient capacity for aggregated current and future demand of residential, business, commercial, and anchor institution users.

A. Yuba County: Fiber strands should be deployed within Yuba County to be able to serve the entire population currently unserved at 100 Mbps down/20 Mbps up. Operationalizing this value into individual fiber strands is challenging, due to a lack of concrete and granular data. What is known is that almost the entire area north of Highway 20 is unserved at 100 Mbps download.

Q. Are there other requirements or standards the Commission needs to consider to determine sufficient capacity?

A. Yuba County: It is highly preferable for the majority of the deployed middle-mile network to be underground. The majority of Yuba County is in areas prone to high fire risk, thereby necessitating fire resilient broadband middle-mile infrastructure.

Q. Should the network also deploy additional conduit within each route for potential future expansion?

A. Yolo County: Additional capacity should be deployed to account for aggregated current and future demand of residential, business, commercial, and anchor institution users.

A. Yuba County: Yes, the additional conduit should plan for projected population growth within the Yuba County foothill region.

A. City of West Sacramento: The state's approach should, to the extent possible be future-proofed. Since required bandwidth is only going up, every effort should be made to accommodate future technologies with the infrastructure investments that are being made today.

Q. Should these factors change based on the population density and distance from the core network?

A. CCABC: Depending on feasibility, deployment schedule and funding, the network should ensure sufficient capacity for future exponential demand growth from different markets, as Internet of Things (IoT) applications for residential and commercial users will be driving traffic growth. For example, low density areas might experience demand growth due to precision agriculture and farm field applications.

III. Conclusion

The Connected Capital Area Broadband Consortium (CCABC) and jurisdictions in the Capital Region are grateful for this opportunity to provide feedback on this historical middle mile deployment. The Consortium supports the deployment of the open access state-owned middle mile network and looks forward to continue participating in this rulemaking proceeding and assisting with the engagement of jurisdictions in the Region.

Dated: September 3rd, 2021

Respectfully submitted,

/s/ David Espinoza

David Espinoza

CCABC Manager

Connected Capital Area Broadband Consortium

Tel: 404-952-8401

E-mail: david.espinoza@valleyvision.org