

**STATE OF CALIFORNIA**  
**Budget Change Proposal - Cover Sheet**  
 DF-46 (REV 10/20)

<b>Fiscal Year</b> 2021-22	<b>Business Unit</b> N/A	<b>Department</b> Control Section 19.50	<b>Priority No.</b> 1
<b>Budget Request Name</b> CS 19.50-001-BCP-2021-MR		<b>Program</b> Various	<b>Subprogram</b> Various

**Budget Request Description**  
 Broadband Infrastructure and Affordability

**Budget Request Summary**

The Administration requests \$7 billion over two years to address the internet connectivity needs of all Californians via Control Section 19.50. The request includes \$2 billion in fiscal year 2021-22 from the American Rescue Plan Act of 2021 (ARPA), and a total of \$5 billion in 2022-23 (\$3.5 billion from ARPA and \$1.5 billion from the General Fund).

<b>Requires Legislation</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>Code Section(s) to be Added/Amended/Repealed</b> Various	
<b>Does this BCP contain information technology (IT) components?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes, departmental Chief Information Officer must sign.</i>	<b>Department CIO</b> Click or tap here to enter text.	<b>Date</b> Click or tap to enter a date.

**For IT requests, specify the project number, the most recent project approval document (FSR, SPR, S1BA, S2AA, S3SD, S4PRA), and the approval date.**

**Project No.** Click or tap here to enter text.    **Project Approval Document:** Click or tap here to enter text.

**Approval Date:** Click or tap to enter a date.

**If proposal affects another department, does other department concur with proposal?**  Yes     No  
*Attach comments of affected department, signed and dated by the department director or designee.*

<b>Prepared By</b> Robert Osborn, California Public Utilities Commission	<b>Date</b> 5/25/2021	<b>Reviewed By</b> Ryan Dulin, California Public Utilities Commission	<b>Date</b> 5/25/2021
<b>Department Director</b> Rachel Peterson, California Public Utilities Commission	<b>Date</b> 5/25/2021	<b>Agency Secretary</b> Click or tap here to enter text.	<b>Date</b> Click or tap to enter a date.

**Department of Finance Use Only**

**Additional Review:**  Capital Outlay     ITCU     FSCU     OSAE     Dept. of Technology

<b>PPBA</b> Click or tap here to enter text.	<b>Date submitted to the Legislature</b> Click or tap to enter a date.
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## A. Budget Request Summary

The Administration requests \$7 billion in one-time federal infrastructure stimulus funds and state funds to address the internet connectivity needs of Californians. Specifically, the Administration requests \$2 billion in fiscal year 2021-22 from the American Rescue Plan Act of 2021 (ARPA) via Control Section 19.50 and a total of \$5 billion in 2022-23 (\$3.5 billion from ARPA and \$1.5 billion from the General Fund).

With these funds, the state will use \$4 billion to construct a statewide, open access, middle mile network using California's highway and utility rights of way. To coordinate this effort, contract for the construction of, and operate this new statewide network, the Office of Broadband and Digital Literacy will be expanded at the Department of Technology (CDT). To complement this step forward on the digital divide, the state will expand existing California Public Utilities Commission (CPUC) universal service programs by utilizing an additional \$2 billion for building out last mile facilities to unserved locations using CPUC's California Advanced Services Fund (CASF) program. Further, to enable local governments to finance local networks for themselves, the state will use \$500 million to create a loan/loss reserve account in the CASF program to enhance the credit of local governments seeking private financing, and the CPUC's High Cost Fund B program will be modified to provide support to new local government and broadband-only providers willing to provide service in high costs areas. Additionally, a new case worker team will provide technical assistance to local governments and work closely with them to facilitate closing the digital divide in their regions. To transform the infrastructure of existing small independent telephone corporations serving as carriers-of-last-resort (COLR), the CPUC's High Cost Fund A program will use one-time finds of \$500 million to upgrade copper facilities to fiber. Lastly, to address the affordability of broadband, the CPUC's California LifeLine program will take steps to address broadband service.

The proposed middle mile network will expand access and capacity for service providers to build in unserved areas of the state, ultimately resulting in more areas with access, better service, and lower prices.

## B. Background/History

### Universal Service

Universal service is the principle that everyone should have access to communications services, and it is a cornerstone of both federal and state communications law. The Telecommunications Act of 1996 expanded the goal of universal service to include increased access to both telecommunications (voice) and advanced services (broadband) for all consumers at just, reasonable, and affordable rates.

Public Utilities (Pub. Util.) Code 709 states the following goals, among others, of California universal service are to:

- Assure the continued affordability and widespread availability of high-quality telecommunications services to all Californians.
- Provide educational institutions, health care institutions, community-based organizations, and governmental institutions with access to advanced telecommunications services in recognition of their economic and societal impact.
- Assist in bridging the "digital divide" by encouraging expanded access to state-of-the-art technologies for rural, inner-city, low-income, and disabled Californians.
- Promote economic growth, job creation, and the substantial social benefits resulting from advanced information and communications through adequate long-term investment.

In 2002, California reached its pinnacle of 98 percent household penetration for wireline voice telephone service, which was possible due to the state's commitment to universal voice service. Since then, wireline voice subscriptions have dropped as consumers have migrated to internet-based mobile devices and voice services that depend on a broadband connection.

## **Analysis of Problem**

California is undergoing a shift in how critical communications are provided, and the state's universal service programs, as originally designed, are unable to adequately deliver fast, reliable, and affordable broadband and voice service to everyone.

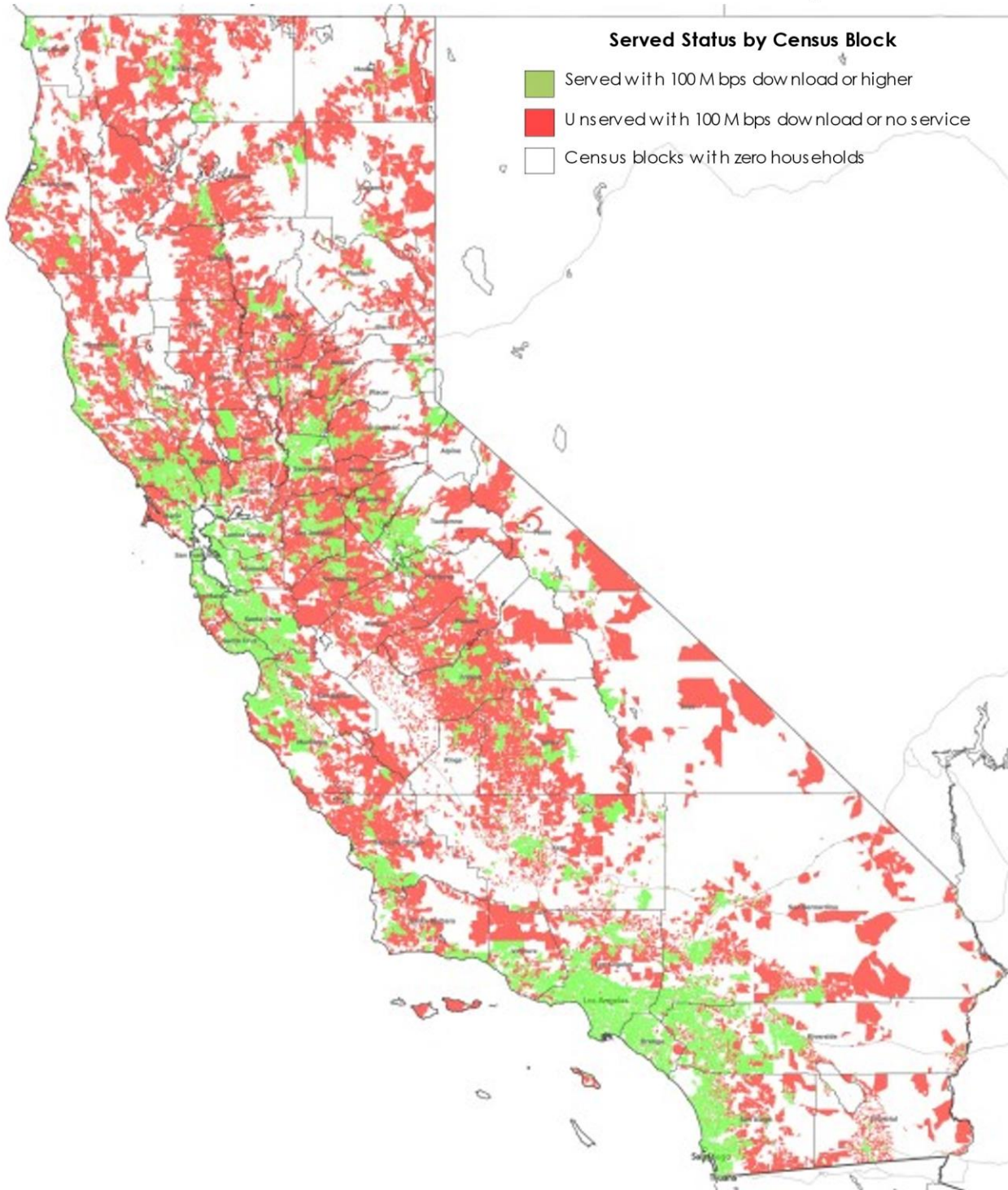
### Broadband Internet Access Service

California has relied on subsidies to private companies to bring broadband service to unserved communities. That approach is no longer effective. Communities that are still unserved lack sufficient population density, household income, or are too expensive for traditional service providers to reach to be profitable. Without significant public sector assistance, these important, high-cost communities are unable to get connected to the internet.

Further, California has vast gaps and inequities in access to and use of broadband. These gaps persist despite federal funding and merger commitments. Based on the most recent available data, 674,730 California households do not have access to speeds of 100 download or faster. Moreover, 47.5 percent of homes do not subscribe to service of at least 100 Mbps download. The importance of, and basis for, these benchmark measures is discussed in greater detail in the Executive Order N-73-20 and Broadband Action Plan 2020: California Broadband for All.

## Analysis of Problem

### End of Year 2019 Fixed Broadband Served Status – 100 Mbps or Greater



Relevant Policy Guidance includes:

- Broadband Action Plan 2020: California Broadband for All outlines actions needed to ensure all Californians have access to affordable broadband and the devices necessary to access the internet.
- Executive Order N-73-20 Directing State Agencies to bridge the state's digital divide.

## Analysis of Problem

### California Advanced Services Fund (CASF)

The CASF program was initiated in 2008, after the program was first adopted by the CPUC in Decision 07-12-054 and enacted into statute pursuant to Chapter 393, Statutes of 2008 (SB 1193).

Public Utilities Code section 281 authorizes the CPUC to develop, implement, and administer the CASF Program to encourage the deployment of high-quality advanced services to all Californians to promote economic growth, job creation, and societal benefits. The CASF provides broadband infrastructure and adoption grants, and consists of the following specified in statute:

- (1) The Broadband Infrastructure Grant Account
  - a. Line Extension Program
- (2) The Rural and Urban Regional Broadband Consortia Grant Account
- (3) The Broadband Public Housing Account
- (4) The Broadband Adoption Account

The program goal is, by December 31, 2022, to approve funding for infrastructure projects that will provide broadband access to no less than 98 percent of California households in each consortia region. The program definition of “unserved household” is a household with no facility-based broadband provider offering service at speeds of at least 6 Mbps downstream and 1 Mbps upstream (6/1).

Chapter 851, Statutes of 2017 (AB 1665), enacted on October 16, 2017, amended Public Utilities Code sections 281 and 914.7 to extend the date of the CASF goal from 2015 to 2022. The bill authorized the CPUC to collect an additional \$330 million beginning January 1, 2018 through the 2022 calendar year, bringing the total program funding authorization to \$645 million. The CASF program has no specific sunset provisions.

### California High Cost Fund-A (CHCF-A)

The CHCF-A provides universal service rate support to small independent telephone corporations serving as carriers-of-last-resort (COLR) in amounts sufficient to meet the revenue requirements established by the commission through rate-of-return regulation.<sup>1</sup> This supports the state's universal service commitment to affordability and widespread availability of safe, reliable, high-quality communications services in rural areas of the state, in accordance with Pub. Util. Code §275.6.

The program supported an average of 46,688 lines monthly during 2019-20 at a per line subsidy of \$60.81 per month or \$729.73 for the year. The CHCF-A program budget for 2019-20 totaled \$49.3 million (\$1.4 million for state operations and \$47.9 for local assistance), similar to previous fiscal year appropriations.

### California High Cost Fund-B (CHCF-B)

The CHCF-B offsets the costs of telephone companies that serve as COLR for voice service in rural, sparsely populated, topographically challenging, and difficult to serve areas of the state. The program was implemented in accordance with Public Utilities Code §276.5. This support provides reliable wireline service and minimizes rate disparities between urban and rural communities. Currently, high-cost areas of California are those in which the monthly cost to the COLR to provide service is \$36 or more per telephone line.

The program supported an average of 83,016 lines monthly during 2019-20 at a per line average subsidy of \$12.48 a month or \$149.77 for the year.

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<sup>1</sup> The CPUC's foundational COLR rules can be found in D.96-10-066, p.193.

## Analysis of Problem

The CHCF-B program expense budget approved for 2019-20 totaled \$22.3 million (\$1.5 million for state operations and \$20.8 million for local assistance), similar to previous fiscal year appropriations. This program has seen a decline in local assistance expenditure amounts over several years due to the substantial reduction in the number of landlines supported by carriers.

### California LifeLine Program (ULTS or California LifeLine)

The California LifeLine Program is the state's main tool for ensuring communications services are affordable for low-income individuals. It provides discounted home phone and cell phone services to eligible households. The discount helps consumers lower the cost of their phone bills and generally only one discount per household is permitted. An open proceeding on LifeLine (Rulemaking 20-02-008) is looking at how to expand the program to include broadband service.

At the end of 2019-20, approximately 1.6 million participants were enrolled in the California LifeLine program, with more than 80 percent receiving a wireless subsidy. In 2019-20 the LifeLine program had expenditures of \$401 million with \$369 million for local assistance and \$32 million for state operations. The program pays up to \$14.85 per month for service and \$39 for activation fee. The California LifeLine subsidy can be combined with the current federal subsidy of \$9.25.

## C. State Level Consideration

The internet is critical to the state's economy, education, and basic health and well-being. The COVID-19 crisis has underscored the need for all Californians to have a robust internet connection that supports their telelearning, teleworking, telehealth, and everyday needs. Long standing inequities in internet availability, affordability, and quality have persisted for too long. The changes proposed in this request are meant to be the enablers of success for communities across the state: to drive economic recovery and development by funding jobs for broadband infrastructure projects in communities that vitally need high-speed broadband, increasing economic expansion, and allowing for distance learning and telemedicine.

More Californians are disconnected than any other state: 674,730 households do not have a high-speed broadband connection. Half of rural households in the state have no high-speed broadband. Tribal lands are disproportionately impacted, with nearly a quarter of households without access.

Even for those that have service available, a broadband connection is still out of reach because broadband is unaffordable. While 1.6 million households subscribe to California Lifeline, the state's low-income subsidy program, this program's mobile data requirements do not provide sufficient service to support teleworking or telelearning. The state's largest internet service providers offer reduced cost programs for low-income individuals, but subscribership is limited, with only 400,000 users subscribed. These programs are not meeting the needs of the estimated 2.3 million households falling below California's poverty level.

One year ago, Governor Newsom launched the "Broadband For All" initiative. On August 14, 2020, Governor Newsom signed Executive Order N-73-20 to mobilize state agencies and resources to bridge the digital divide and kick off the California Broadband Action Plan development process. The California Broadband Action Plan provides a blueprint to guide coordinated actions and put California on a path toward ubiquitous broadband availability, reliability, and affordability. The Plan, adopted December 17, 2020, lays out three main goals: that Californians have access to high-performance broadband at home, that Californians can afford broadband and the devices necessary to access the internet, and that Californians can access training and support to enable digital inclusion. The COVID-19 Pandemic has highlighted and exacerbated the digital divide. An internet connection is no longer just an equity issue or a convenience service, it is a matter of public safety and public health and is

## Analysis of Problem

necessary for economic resilience and recovery. Communities without access are suffering without functional telework, telehealth, and telelearning opportunities.

### D. Justification

California can achieve equitable broadband infrastructure, affordability, and access through targeted investment in key communication areas. The goals are to (1) extend broadband infrastructure to hard-to-reach, high-cost areas, (2) expand affordable broadband for low-income households and communities, and (3) improve internet speeds for underserved customers.

To accomplish these goals, California's communications programs and resources will be focused on the following areas:

Infrastructure: The state will make a generational investment in broadband deployment and infrastructure that reaches all Californians with access to a landline.

Affordability: For years, the state and federal government have partnered with providers to provide affordable communication services. Updating the California LifeLine Program will continue to provide all Californians with equitable access to 21st century communications.

#### Network Infrastructure

The lack of available middle mile broadband infrastructure is a major issue in connecting California's unserved and underserved communities. Open access middle mile can provide affordable service for anchor institutions and reduce the price of broadband Internet service by enabling competitive last mile networks.

Last mile infrastructure relies on middle mile to provide service to residents, large and small businesses, schools, government offices, public safety agencies, and libraries. An open-access middle mile network provides the backbone for last mile providers to serve residences and provide more affordable service for businesses and anchor institutions.

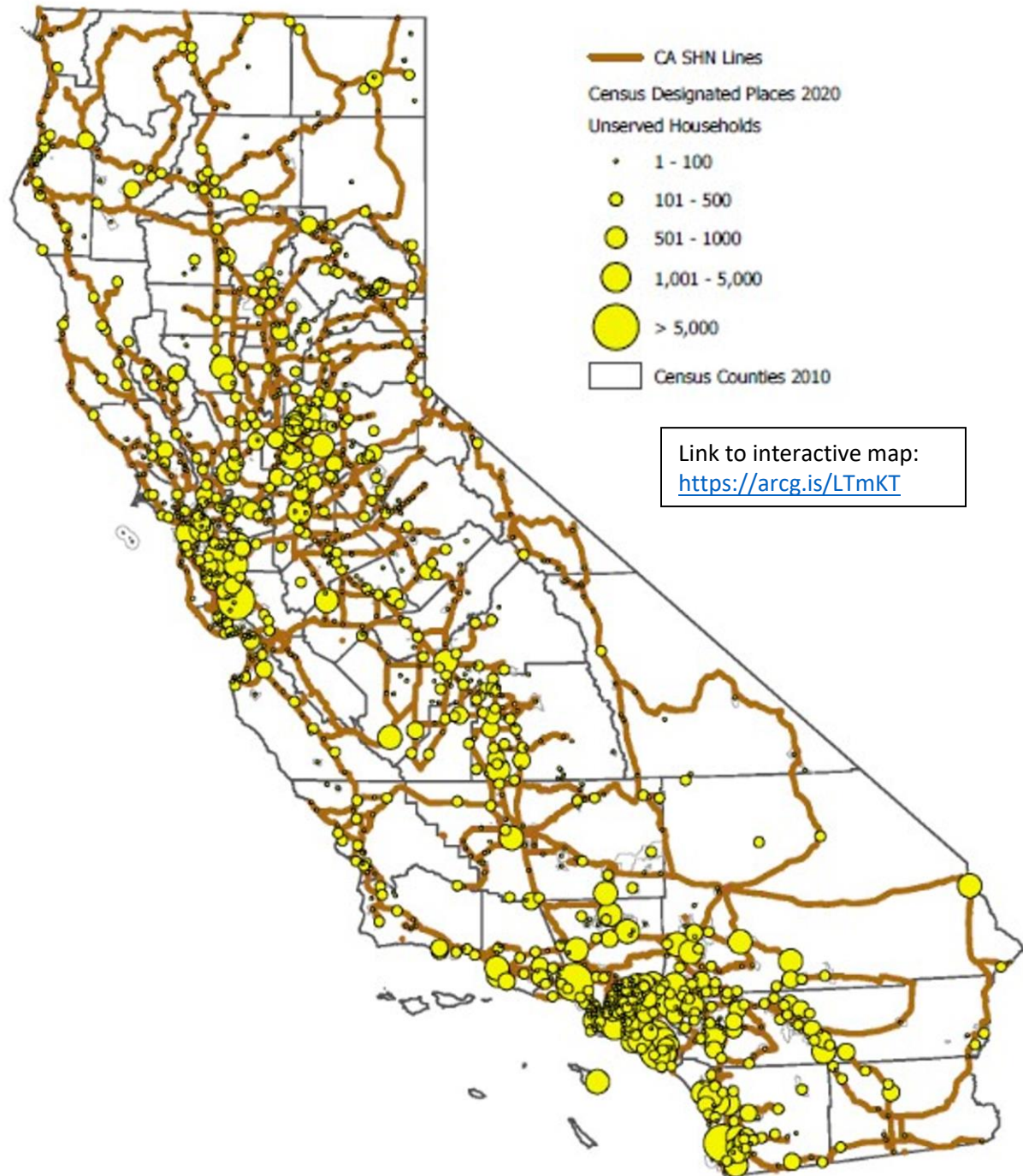
- "Middle Mile" refers to the high-capacity fiber-optic cables that traverse long distances (i.e., 10's-100's of miles) to connect communities to the internet backbone. These high-capacity lines are analogous to transmission lines for electric utilities, or aqueducts and rivers for water utilities.
- "Last Mile" refers to the wires or cables that connect a house to the nearest utility pole and connect a community to the middle mile.
- "Open Access" refers to a network model that allows any entity to access and utilize the infrastructure at a fair market rate and in a non-discriminatory manner.

For new service providers, leasing middle mile access from incumbent operators is expensive, frequently unavailable, and can be a barrier to building infrastructure for competitive, non-incumbent broadband internet services. Similarly, constructing middle mile network infrastructure for new operators is capital-intensive and not necessarily within their core function.

The proposal is to utilize, in consultation with other state agencies, one-time federal infrastructure funds to construct an open access, fiber middle mile network using a combination of public and privately owned rights of way. The CPUC will work with CDT to determine the proposed routes for the middle-mile network. An example middle-mile routes analysis is shown in the map below based on existing state highway rights of way.

## Analysis of Problem

### State Highway Segments connected Unserved Census Designated Places



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The management and operation of this middle mile network will be coordinated through an expansion of the Office of Broadband and Digital Literacy currently located under the CDT. The Office is well situated to manage this effort given its existing efforts to promote broadband access and digital literacy throughout California to the unserved and underserved and its role supporting the California Broadband Council. The Office will oversee the construction of a statewide middle mile network connecting anchor institutions and state facilities across California. The Office will operate the network in an open-access manner to provide



## Analysis of Problem

opportunity for last mile providers to connect and deliver high-speed broadband service across California.

Connecting the remaining unserved communities to last mile networks requires public support because it is often unprofitable for private industry to build there. Many areas have low housing density, low-income residents, and/or terrain which make the areas difficult and expensive to build.

The state proposes to use an additional \$2 billion of ARPA funding to build last mile facilities to unserved locations through a new federal funds account in CASF. In addition, a new loan/loss reserve account in CASF will make \$500 million available to local governments, tribes, and non-profits to help finance local networks for themselves. The CHCF-A will use one-time finds of \$500 million to upgrade small independent telephone corporations', serving as COLRs, copper facilities to fiber. Further, the CHCF-B will be modified to provide necessary support to encourage new local government, tribal, and broadband-only providers in high costs areas.

Last and middle mile broadband infrastructure is indispensable to California's goals of universal service, recovering from the pandemic, and jump-starting economic development. Open access middle mile infrastructure will be a foundational investment to provide internet connectivity to Californians.

### Universal Service

California is undergoing a seismic shift in the provision of critical communications, and the state's universal service programs need to evolve to continue delivering fast, reliable, and affordable service to everyone. The COVID-19 Pandemic made this problem more evident, because it exposed gaps both in California's approach and its universal service funding.

This comprehensive set of reforms modernizes California's universal service programs to:

- Invest finite resources smartly, making long-term investments by better leveraging federal and outside funding.
- Target communities most in need to make affordable broadband available to more low-income families.
- Maximize the public benefits that funded projects provide.
- Measure and evaluate progress.

Changes in the following existing programs will update the state's universal service programs to meet the current challenges:

1. California Advanced Services Fund (CASF)—Update, modernize, and expand the state broadband infrastructure program to build future-proof networks.
  - Support local entities deploying broadband infrastructure in their communities by providing technical assistance in obtaining financing through a loan/loss reserve.
  - Enable last-mile network construction by offering financial assistance to service providers by relying on a combination of grants and competitive bidding.
2. California High Cost Fund-A (CHCF-A)—Expand the CHCF-A to fund broadband infrastructure upgrades to increase broadband speeds delivered by small independent telephone corporations serving as COLRs in hard to service areas.
3. California High Cost Fund-B (CHCF-B)—Update and expand the state's other COLR program to subsidize the ongoing operational costs of broadband service in high cost, hard-to-serve areas of the state and allow for participation in the program by local governments, tribes, and broadband-only providers.
4. California LifeLine Program—Update the state program that provides affordable communications services for low-income households to also subsidize broadband services.

## Analysis of Problem

### E. Outcomes and Accountability

The planned investments in a statewide open access middle mile network covering approximately 8,000 highway miles, last mile network infrastructure supporting affordable infrastructure, innovative broadband financing, and targeted technical assistance will benefit every county, serve unserved households in census designated places along highways across the state, and invest in affordable last mile service to the most difficult to serve and most unconnected communities in order to effectuate universal broadband service.

### F. Analysis of All Feasible Alternatives

Alternative 1: Approve proposal as requested

Pros: Californians, regardless of where they live, will have access to high-performance broadband at home and will be able to afford broadband and the devices necessary to access the internet.

Cons: Requires state and federal funds.

Alternative 2: Maintain status quo

Pros: No new expenditures

Cons: Leave 674,430 households without broadband access and 2.3 million households living in poverty without a low-income broadband subsidy, leave public federal stimulus dollars on the table, and undermine the state's economic recovery. Unserved and underserved communities will continue to be unserved and underserved due to lack of technical support and planning, grant subsidies, and broadband-related support subsidies.

### G. Implementation Plan

The CPUC, in consultation with other state agencies including Caltrans, will analyze the proposed middle mile status, rights of way, and availability of existing fiber to determine priority areas.

In new or existing rulemakings, the CPUC will modify program rules to:

- Develop policy goals and direction to guide the implementation of middle and last mile networks.
- Update the CASF rules. Implement the CASF Federal Funding Account to provide last mile service. Further, adopt rules for the CASF Loan Loss Reserve Account.
- Establish rules and procedures for CHCF-A carriers to upgrade copper networks to provide fast, affordable broadband service.
- Expand CHCF-B to subsidize broadband service and establish rules and procedures to allow new entrants into the program.
- Expand California LifeLine to subsidize broadband service and establish rules and procedures for allowing new entrants into the program.

CDT will coordinate between the CPUC and Caltrans, and oversee the acquisition and management of contracts for the development, construction, maintenance, and operation of the statewide open-access middle mile network. Specifically, CDT will:

- Develop the statewide open-access middle-mile broadband network based on planning information provided by the CPUC.
- Oversee the procurement activities, including those undertaken by Caltrans, to build the middle-mile network.

## **Analysis of Problem**

- Ensure state agencies work in cooperation to expedite the delivery and permitting of the statewide open-access middle-mile broadband network.
- Develop policies and regulations related to the construction and operation of the network.
- Engage with possible future network operators.

### **H. Supplemental Information**

Not available

### **I. Recommendation**

The COVID-19 crisis has made obvious the critical role of the internet in supporting the state's economy, education, and basic health and well-being. Robust affordable internet service that reinforces telelearning, telework, telehealth, and everyday needs must be available to all Californians. Building on the recommendations of the Broadband State Action Plan, this request proposes updates and expansions that will maximize investment in broadband, promoting the availability of universal internet access.

To address the internet connectivity needs of Californians, the Administration recommends approval of this proposal to utilize one-time federal infrastructure stimulus funds and General Fund to expand existing CPUC universal service programs to promote and support the elimination of inequities, expanding access to affordable broadband for low-income individuals, and providing local governments and regional agencies with the authority and tools necessary to improve their own broadband access.