State of California Five-Year Action Plan Broadband Equity, Access, and Deployment (BEAD) Program

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California Public Utilities Commission

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1. Executive summary

The California Public Utilities Commission (CPUC), the Eligible Entity for the State of California, is pleased to present this Broadband Equity, Access, and Deployment (BEAD) Program Five-Year Action Plan, which comprises a needs assessment (including the needs of covered populations and underrepresented communities) and establishes California's goal of ensuring universal broadband service availability for all residents, businesses, and institutions.

This Plan is aligned and coordinated with the CPUC's ongoing efforts to achieve broadband equity in the State. The CPUC is also fully coordinating its BEAD activities with the California Department of Technology (CDT), which is the State of California's designated entity for the Digital Equity elements of the Infrastructure Investment and Jobs Act.

This Plan follows National Telecommunications and Information Administration's (NTIA) template and meets all requirements established in the BEAD Notice of Funding Opportunity (NOFO).

1.1 Vision

This Five-Year Action Plan establishes California's broadband goals and priorities for the BEAD program—and presents a needs assessment that will inform the State's Initial Proposal.

This Plan aligns with California's Broadband for All[1] initiative, which reflects Governor Gavin Newsom's significant commitment to close the digital divide in California. This is exemplified in the Broadband for All Action Plan,[2] prepared in response to Executive Order N-73-20,[3] and in the once-in-a-lifetime investments authorized under Senate Bill 156 (Chapter 112, Statutes of 2021)[4] which committed $6 billion toward development of a statewide open-access middle-mile network and grants for last-mile infrastructure and technical assistance.

Under the banner of Broadband for All—California's commitment to closing the digital divide—the CPUC seeks to realize a vision where all Californians have access to affordable, high-performing broadband service at home, schools, libraries, and businesses.

[1] "California Broadband for All," https://broadbandforall.cdt.ca.gov/.

[2] "California Broadband for All Action Plan," California Broadband Council, 2020, https://broadbandcouncil.ca.gov/wp-content/uploads/sites/68/2020/12/BB4All-Action-Plan-Final.pdf.

[3] "Executive Order N-73-20," State of California, August 14, 2020, https://www.gov.ca.gov/wp-content/uploads/2020/08/8.14.20-EO-N-73-20.pdf.

[4] "Senate Bill 156," https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220SB156.

1.2 Current state of broadband and digital inclusion

Broadband access is available throughout most of the State (see Section 3.3.1), but too many Californians continue to lack access to reliable, affordable broadband service at served speeds. Estimating the number of remaining unserved locations depends on the specific parameters employed and characteristics of the dataset utilized. California has identified multiple estimates of locations lacking broadband (see Section 3.4.4).

In June, the NTIA identified 306,910 unserved locations in California, based on Federal Communications Commission (FCC) data, which was used to determine California's BEAD allocation. For the purposes of this Plan, and the subsequent Initial Proposal, CPUC will use NTIA's figures as the target number of unserved locations to connect using California's BEAD allocation.

The processes for the CPUC's BEAD program implementation are defined by NTIA program rules and will be implemented upon approval of the State's Initial Proposal by NTIA. (See Section 5.1.1 for further discussion of the BEAD program process.)The CPUC's experience administering broadband grant programs for more than a decade (see Section 3.1), developing corresponding maps of locations lacking broadband, and implementing processes for soliciting public feedback and challenges of provider-submitted data has positioned it well to leverage lessons from this work to produce the most accurate map of BEAD-eligible locations possible by relying on both its own broadband availability data and a robust challenge process.

1.3 Obstacles or barriers

The CPUC has identified potential obstacles or barriers that it will seek to mitigate as it implements this Plan and the aligned goals of the California Broadband for All Action Plan. As discussed in Section 4, these include, but are not limited to, the following:

- **Targeted funding:** The CPUC estimates it has approximately $5 billion in funding available (including NTIA's BEAD allocation, funding from Senate Bill 156, and the California Advanced Services Fund) to support broadband deployment. While significant, this funding will not enable deployment of broadband infrastructure to all unserved locations in the State if not spent prudently, coordinated effectively, and targeted toward communities most in need.

- **Timeline:** Given California's large size, it may be a challenge for some of the CPUC's BEAD-funded subgrantees to deploy broadband infrastructure within the required timeline.

- **Permitting:** Given the size of the State and the multiple permitting entities from which grantees will need to gain approval, permitting for infrastructure projects will represent a major challenge.

- **Labor shortages**: According to the Public Policy Institute of California, labor shortages are a potential obstacle and cause for delays of broadband deployment projects in the State. Labor shortages for broadband deployment projects are particularly pronounced on Tribal lands as Tribal governments in California compete for qualified workers with other projects being planned in the State.[5]

- **Supply chain constraints**: According to recent research, there is a nine- to 12-month waiting period on orders of new fiber. This situation could delay access to infrastructure components needed to complete projects.

- **Challenging topography**: California's widely varied topography includes mountains, desert, waterways, and other geographic features that will create challenges for the deployment of broadband infrastructure. The CPUC's potential partners in local and Tribal government are also keenly aware of the barriers created by topography in their regions.

- **Climate resiliency**: An independent report[6] commissioned by the CPUC noted that fiber-optic network construction in the State must take into account risks from wildfires. According to the report, installing cables underground can provide protection against heat damage in areas prone to fire.

- **Affordability**: Consumers need affordable utility services, including communications services, to ensure health, safety, and participation in society. The CPUC has used the proceeding to examine the impact of service charges for essential services on residential households at various socioeconomic statuses.

The CPUC will be keenly considering these challenges, and mitigation strategies to address them, as it develops it Initial Proposal later in 2023.

1.4 Implementation plan

This Plan presents the CPUC's estimated costs, timeline, and strategies for its BEAD-funded grant program and a discussion of its work toward achieving universal service in alignment with the California Broadband for All Plan—along with strategies related to remedying inequities in digital inclusion (see Section 5).

[5] "After federal investment, supply chain jams and labor shortages still hinder tribal broadband access," Marketplace (April 6, 2023). Comments by Southern California Tribal Chairmen's Association broadband advisor. https://www.marketplace.org/2023/04/06/tribal-broadband-access-supply-chain-jams-labor-shortages/.

[6] "Broadband Factors for Last-Mile Connectivity," California Public Utilities Commission, December 2021, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/broadband-implementation-for-california/caseworkers/ctc-report-to-cpuc---middle-mile-broadband-factors-for-last-mile-connectivity---20211228.pdf.

1.4.1 Stakeholder engagement process

The CPUC has implemented extensive processes to identify stakeholders and stakeholder groups, conduct inclusive engagement with a broad range of communities, and facilitate engagement with stakeholders across the State. The CPUC intends to continue its stakeholder engagement and outreach efforts around broadband deployment and digital equity in the State—particularly to engage with covered populations and stakeholders that historically may not have had as much representation in public planning processes.

As part of the preparation process for the Five-Year Action Plan and the BEAD program more generally, the CPUC partnered with CDT to jointly conduct 17 Broadband for All, Digital Equity, and BEAD Planning Regional-Local Workshops in communities across California. These events were attended by more than 2,000 community members, local officials, and interested parties, and provided a forum for attendees to learn about planning for their communities, accessing programs to create digital equity, submitting feedback on how the State's efforts to close the digital divide could be improved or made more inclusive, and connecting with members of their communities who are passionate about digital equity in California.

Feedback, findings, and critical learning from these events have been summarized and coordinated as part of the CPUC's open rulemaking proceeding and will be made part of the record of that proceeding. Additionally, the CPUC has referenced much of that learning to update this Five-Year Action Plan. It will also use the extensive discussion during these workshops to further refine its Initial Proposal, Challenge Process, and BEAD grant program design.

1.4.1.1 Tribal consultation

In addition to the 17 Regional-Local Workshops, the CPUC and CDT conducted three in-person Broadband for All, Digital Equity, and BEAD Regional Tribal Consultations with representatives of Tribes in Northern, Central, and Southern California, as well as an additional virtual consultation. Results from these discussions are reflected in this Five-Year Action Plan and will be further used to refine BEAD program elements. The CPUC is also conducting government-to-government consultations with more than 20 individual Tribes that requested individual consultations to further discuss the BEAD program and the individual Tribe's specific circumstances.

1.4.1.2 CPUC coordination with CDT

The CPUC is working in close coordination with CDT on both the State Digital Equity Plan and the BEAD process. This includes collaborating extensively in the process of crafting the State Digital Equity Plan, led by CDT, participating in the quarterly Statewide Planning Group, attending meetings of the Outcome Area Working Groups, and engaging with CDT to support solicitation of input for the State Digital Equity Survey and Digital Equity Ecosystem Mapping (DEEM) Tool.

1.4.2 Priorities

The State's priorities for broadband are outlined in the Broadband For All Action Plan and are listed in Section 2.2 of this Plan. These goals, including the priority to deploy broadband to all unserved

locations, align with the stated goals for the BEAD program as outlined in the Notice of Funding Opportunity (NOFO).

While the BEAD NOFO provides clear guidance on federal rules and minimum standards for the program, it also provides for states' discretion on additional requirements and priorities to ensure programs meet the needs of individual states. The CPUC is required to gather public input in an open public proceeding to design and craft these additional requirements, which may include adding priorities within the Initial Proposal, and to determine how the BEAD funds will be offered to qualified subgrantees.

1.4.2.1 Public rulemaking proceeding

On February 23, 2023, the CPUC opened a rulemaking proceeding[7] to gather input on potential additional requirements, guidelines, and priorities for the BEAD program. The CPUC requested public comment on a number of issues in its Order Instituting Rulemaking to inform and support its BEAD program deliverables including the Initial Proposal, Challenge Process, and grant program design. (For more information on the CPUC's public deliberative rulemaking process for BEAD, see Section 5.1.)

The CPUC received opening and reply comments from a wide variety of stakeholders including ISPs, local governments, small businesses, consumer and community advocates, and legislators. The comments are each posted on the CPUC's website in the open proceeding and are part of the record of this proceeding.[8]

The comments supported and reinforced many elements of the Five-Year Action Plan. Several comments request further description and analysis of the learnings from the Planning Workshops and Tribal Consultations.

The CPUC has incorporated many of the comments as appropriate and necessary throughout this Plan. Other comments are more appropriately addressed in the State's other broadband plans, including the CPUC's upcoming Initial Proposal comment process or CDT's State Digital Equity Plan public comment process. The CPUC will use these comments to further refine its deliverables to NTIA and related issues pending in the open proceeding.

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[7] "CPUC To Consider Rules for Federal Broadband Funding," CPUC, February 23, 2023, Press Release, https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-to-consider-rules-for-federal-broadband-funding-2023. *See also:* "Order instituting rulemaking (OIR)," https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M502/K359/502359503.PDF. For full details on the proceeding, see: "R2302016 - Proceeding," CPUC, https://apps.cpuc.ca.gov/apex/f?p=401:56:0::NO:RP,57,RIR:P5_PROCEEDING_SELECT:R2302016.

[8] Order Instituting Rulemaking Proceeding to Consider Rules to Implement the Broadband Equity, Access, and Deployment Program (R.23-02-016), Proceeding, https://apps.cpuc.ca.gov/apex/f?p=401:56::::RP,57,RIR:P5_PROCEEDING_SELECT:R2302016.

1.4.2.2 Environmental and Social Justice Action Plan

The CPUC will rely on its Environmental and Social Justice Action Plan[9] as a cornerstone for its work on BEAD program implementation. The Action Plan includes commitments by the Commission to integrate equity and access considerations throughout its proceedings and other policy development efforts and to improve communications capabilities for underrepresented communities.

The CPUC will implement the goals set out in the Environmental and Social Justice Action Plan through its BEAD program work, including its commitment to specifically address the needs of disadvantaged communities, Tribal lands, and low-income households through continued outreach and engagement with community-based organizations and the public.

In its open rulemaking proceeding, the Commission requested comment on how the nine goals of its current Environmental and Social Justice Action Plan can address barriers faced by disadvantaged communities. The CPUC will use these comments, and the tenets of the Action Plan itself, to refine its Initial Proposal and BEAD program grant design on issues covered by the Action Plan related to affordability and rate burdens, "high road" workforce development in disadvantaged communities, broadband access, and participation in the public process. The CPUC acknowledges that its efforts to support the Action Plan during this process will require public comment processes and participation using materials and pathways for engagement targeted directly for audiences of underrepresented communities.

Digital equity priorities are being developed through a parallel effort conducted by CDT. The CPUC will continue to closely coordinate its work on the BEAD program with CDT's efforts through public events, surveys, workshops, coordination meetings, and other activities under the State's Broadband for All initiative. The CPUC will also continue to implement statewide policy goals of equity and digital inclusion through its BEAD program design and compliance with federal program rules.

1.4.3 Estimated timeline and cost for universal service

California anticipates using its Initial Proposal to further refine its estimates for the timeline and cost to provide universal service as defined by the BEAD program, given the different parameters employed by BEAD for defining universal service compared to the goals of California's FFA and CASF programs. California will submit an Initial Proposal that meets BEAD program requirements for achieving universal service as defined by the BEAD program within the required timeline and utilizing an appropriate Extremely High-Cost Per Location Threshold that maximizes fiber deployment where possible while still achieving BEAD requirements for serving unserved locations.

California has estimated the cost to deliver universal service as defined by the FFA program, which is presented here for illustrative purposes. To implement California's FFA program, the CPUC contracted with CostQuest to use forward-looking cost models to estimate the investment required to deploy a fiber-to-the-premises network to all locations classified as unserved under the FFA rules

[9] CPUC, Environmental and Social Justice Action Plan (v. 2.0, April 7, 2022) https://www.cpuc.ca.gov/ESJactionplan/.

and mapping data analysis, defined as lacking non-legacy wireline technologies providing speeds of 25/3 Mbps or more. Based on the modeling, an estimated $9.78 billion investment will be needed for new fiber and equipment to serve all of these validated unserved and underserved locations with a fiber-to-the-premises network design, including plans for additional hardening for locations in high fire threat districts. This estimate assumes no re-use of existing infrastructure (e.g., poles, conduit, manholes, etc.) in the total investment.[10]

The timeline for universal service with fiber-to-the-premises would extend beyond the BEAD funding timeline and require additional federal and State funding. Additionally, the authorizing statute for the CASF program further establishes a specific goal for the Broadband Infrastructure Grant Account to approve funding by December 31, 2032, for infrastructure projects providing broadband access to no less than 98 percent of California households in each Regional Broadband Consortia region, delegating responsibility for achieving this goal to the CPUC. This goal is separate from the requirements established by BEAD but demonstrates California's longstanding commitment to ensuring all Californians have high-performance broadband available.

The CPUC will continue to design programs and policies with a goal of achieving universal broadband service in California. The CPUC recognizes, however, that its processes and timeline to achieve this goal may be affected by the lack of sufficient funding or other considerations. Guided by the BEAD program requirements, the Environmental and Social Justice Action Plan, the California Broadband for All Action Plan, and the outcome of the CPUC's open BEAD proceeding, the CPUC will develop and administer a grant program using a mix of technologies to fit within the BEAD allocation of $1,864,136,508.93.

1.5 Confirmation that this BEAD Five-Year Action Plan meets minimum requirements

This Five-Year Action Plan meets minimum requirements as outlined in the NOFO and summarized in Section 7.1 of the NTIA's "Five-Year Action Plan: Guidance" document:

Requirement	Section in this Plan
1. Details of existing broadband program or office within the Eligible Entity	Section 3
2. Funding the Eligible Entity has available	Section 3
3. Existing efforts funded by the federal government	Section 3
4. Employees and contract support	Section 3
5. Obstacles or barriers	Section 4

[10] "California Broadband Investment Model – Last Mile Funding Analysis: Process Overview and Methods," CostQuest Associates, April 2023, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/broadband-implementation-for-california/ffa-webpages/ca-broadband-investment-model_04212023.pdf. CostQuest notes that it also excluded locations from the unserved total where infrastructure projects are funded by CASF and where projects are presumed to be funded by the federal Rural Digital Opportunities Fund.

Requirement	Section in this Plan
6. Asset inventories	Section 3
7. Description of external engagement process	Section 3 Section 5.1
8. Broadband availability and adoption data	Section 3 Section 5
9. Broadband service needs and gaps	Section 3 Section 5
10. Comprehensive, high-level plan, including estimated timeline and cost for universal service	Section 5
11. Digital equity and inclusion needs, goals, and implementation strategies[11]	Section 2 Section 3 Section 5
12. Alignment of the Plan with other State efforts and priorities	Section 5
13. Technical assistance and capacity needed for successful implementation	Section 5

[11] The CPUC is fully coordinating its BEAD activities with the California Department of Technology (CDT), which is the State of California's designated entity for the Digital Equity elements of the Infrastructure Investment and Jobs Act.

2. Overview of the Five-Year Action Plan

2.1 Vision

This Five-Year Action Plan establishes California's broadband goals and priorities—and presents a needs assessment that will inform the State's Initial Proposal.

This Plan aligns with California's Broadband for All initiative, which reflects Governor Gavin Newsom's significant commitment to close the digital divide in California. This is exemplified in the Broadband for All Action Plan, prepared in response to Executive Order N-73-20, and in the once-in-a-lifetime investments authorized under Senate Bill 156 (Chapter 112, Statutes of 2021) which committed $6 billion toward development of a statewide "open-access" middle-mile network and grants for last-mile infrastructure and technical assistance.

Under the banner of Broadband for All, California's commitment to closing the digital divide, the CPUC seeks to realize a vision where all Californians have access to affordable, high-performing broadband service at home, schools, libraries, and businesses.

California understands that access to broadband is not a luxury, but an essential service necessary to participate in everyday life:

- Broadband access enables individuals, including in rural communities and Tribal communities, to work, study, communicate, apply for government services, operate home-based businesses, receive emergency information, and access health care.
- Broadband powers the State's most critical systems, from its electrical grid to its water supply systems, its public safety and emergency response networks. Broadband underpins modern life.
- Broadband has helped ensure California's ability to compete on the world stage for years. Broadband enables communities to build thriving economies by attracting talent and businesses. It powers California's advancement and success in industries from higher education to manufacturing and agriculture, and in the service economy.

The Broadband, Equity, Access and Deployment (BEAD) program is part of the Biden-Harris Administration's efforts to realize the vision of "Internet for All" – which aligns perfectly with the State's existing goals—and will help California augment and expand our existing efforts to ensure every Californian is served by affordable and reliable broadband.

The State's digital equity vision is being developed through a parallel effort conducted by the California Department of Technology (CDT).

2.2 Goals and objectives

The State of California developed the Broadband for All Action Plan with the understanding that equity warrants broadband access that is affordable and reliable for every California. The CPUC's goals for this Five-Year Action Plan—which are aligned with the principal focus of the BEAD Program[12]—are as follows:

- Ensure every Californian has access to quality, reliable, high-speed internet, no matter where they live, whether that be in rural communities, in cites or suburbs, or on sovereign Tribal lands.
- Make quality, reliable, high-speed internet more affordable across California, particularly for individuals living on limited incomes.
- Support the sovereignty of Tribal Nations by partnering with interested California Tribes to develop Tribal-owned broadband networks.
- Empower local and Tribal governments across California to develop and implement reliable, high-performance broadband infrastructure to support local community goals and needs and support broadband networks owned, operated by, or affiliated with local governments, nonprofits, Tribes, and cooperatives, which have less pressure to generate profits and are committed to serving entire communities.
- Strengthen partnerships and coordinate initiatives that will promote access to tools for digital inclusion, including affordable devices, technical assistance, and training.

To seek to achieve these goals, the CPUC will advance the following objectives:

- Establish a data-driven strategy to map and assess unserved and underserved locations in California so we can effectively target resources to close deployment gaps.
- Leverage all available federal and State sources of broadband funding to achieve California's broadband deployment goals, including but not limited to the CASF and broadband programs created under California SB 156.
- Create a holistic approach and framework for California's broadband infrastructure funding programs to encourage and support projects that will advance equal access to affordable, high-performance broadband and also include the devices, training, and skills necessary for digital inclusion of all Californians.

[12] "NOFO: BEAD Program," NTIA, https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf, at p. 7.

- Provide technical assistance and support to California Tribes, local governments, and other entities to help them prepare to leverage federal and State funding opportunities related to broadband.

3. Current state of broadband and digital inclusion

This section describes the current state of broadband and digital inclusion in California, as documented through rigorous and comprehensive data collection and stakeholder outreach efforts. It begins with an overview of the State's past and current efforts to promote broadband deployment and digital equity; describes the resources and relationships available to the CPUC; presents detailed asset inventories related to broadband deployment, adoption, affordability, and access, and digital equity activities; and presents a needs and gaps assessment (including a needs assessment for underrepresented communities).

3.1 Existing programs

In addition to the guidance established by the State's Broadband for All Action Plan—which lays out California's vision, goals and objectives for broadband access, deployment, and digital equity—the CPUC has significant experience administering broadband grant programs, collecting data, and mapping.

This section addresses item 1 in the Five-Year Action Plan requirements: Details of existing broadband program or office within the Eligible Entity.

3.1.1 California Advanced Services Fund

The CPUC authorized the California Advanced Services Fund (CASF) by adopting Decision 07-12-054 in accordance with Public Utilities (P.U.) Code § 701. The Commission adopted the CASF application requirements, timelines, and scoring criteria for parties to qualify for broadband project funding in Resolution T-17143 in June 2008. The Legislature reaffirmed the Commission's creation of the CASF program in Senate Bill (SB) 1193, which then Governor Schwarzenegger signed on September 2008, and codified the program as P.U. Code § 281.

Currently, there are six programs under the CASF to help support broadband deployment, adoption and technical assistance. (See brief descriptions of each in the table below—and complete overviews on the CPUC's website.)[13] Since its inception in 2008, as of December 2021, $348 million has been awarded to support 108 projects potentially benefiting 327,957 households across 43 counties.

Because the CASF programs are funded using surcharges on the revenues collected by telecommunications carriers, these programs are ongoing and accept applications on a quarterly to annual basis, depending on the program. As a result, the CPUC has been administering broadband

[13] "California Advanced Services Fund (CASF)," CPUC, https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/california-advanced-services-fund.

grant programs for over a decade and is well poised to leverage the lessons from this work into the administration of the BEAD program.

3.1.2 Broadband for All (Senate Bill 156)

As part of the 2021-2022 budget, California invested $6 billion in federal and State funding over three years to expand broadband infrastructure, increase affordability, and enhance access to broadband for all Californians. Senate Bill 156 (Chapter 112, Statutes of 2021) outlined four new CPUC programs and made wide-ranging changes to the CASF statute. Funding is allocated for the following:

- $3.25 billion for an open-access statewide broadband middle-mile network,
- $2 billion for broadband last mile infrastructure projects, of which $50 million has been provided for local agency technical assistance grants including funding for Tribal entities, and
- $750 million for a loan loss reserve to support local government broadband infrastructure development.[14]

The programs are designed to address various challenges to ensuring all Californians have access to broadband service.

Open-access middle-mile – The State of California will design, build, maintain and operate an essential open-access statewide middle-mile network, which will be overseen by the California Department of Technology (CDT).

Last mile infrastructure projects – The broadband investment includes funding for a comprehensive strategy to build last-mile infrastructure to provide Californians with access to high-speed broadband service in coordination with federal and State universal service programs, such as those to connect schools, disabled users, and low-income households.[15]

Loan Loss Reserve Fund – The fund will assist local governments, Tribes, and non-profits in securing enhanced private financing to construct and operate new public broadband infrastructure networks.

Local Agency Technical Assistance – The grants enable local and tribal governments to receive support for pre-project related costs and other work that facilitates broadband network deployment projects in communities that lack adequate broadband access. This work can include the possible

[14] CPUC, "Broadband Implementation for California," https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/broadband-implementation-for-california.

[15] CPUC, "Last-Mile Broadband Fact Sheet," https://www.cpuc.ca.gov/-/media/cpuc-website/industries-and-topics/documents/telecommunications/broadband--fact-sheet_083021.pdf.

formation of coalitions among municipal entities and agreements for financing of broadband infrastructure. This funding can also be used to create Joint Powers Authorities and other public organizations to deploy broadband infrastructure and for environmental permitting, engineering, and design activities. [16]

3.1.2 Infrastructure funding for small ILECs

The California High-Cost Fund A (CHCF-A) program provides financial support to small incumbent local exchange carriers (Small ILECs) to provide voice and broadband service in high-cost rural areas of the State.[17] Small ILECS are rural telephone corporations subject to commission regulation. Currently, the CHCF-A supports 10 independent Small ILECs. The fund helps offset the high cost of providing service in the Small ILECs' territories, which are often rural areas, sparsely populated, and face geographic barriers.

As a condition of receiving CHCF-A support, a Small ILEC is subject to rate-of-return regulation and must file a General Rate Case (GRC) application—a formal proceeding used to recover costs of operating and maintaining a telephone corporation's plant and equipment, as well as providing the opportunity to achieve a reasonable rate of return.

3.1.3 California Interactive Broadband Map

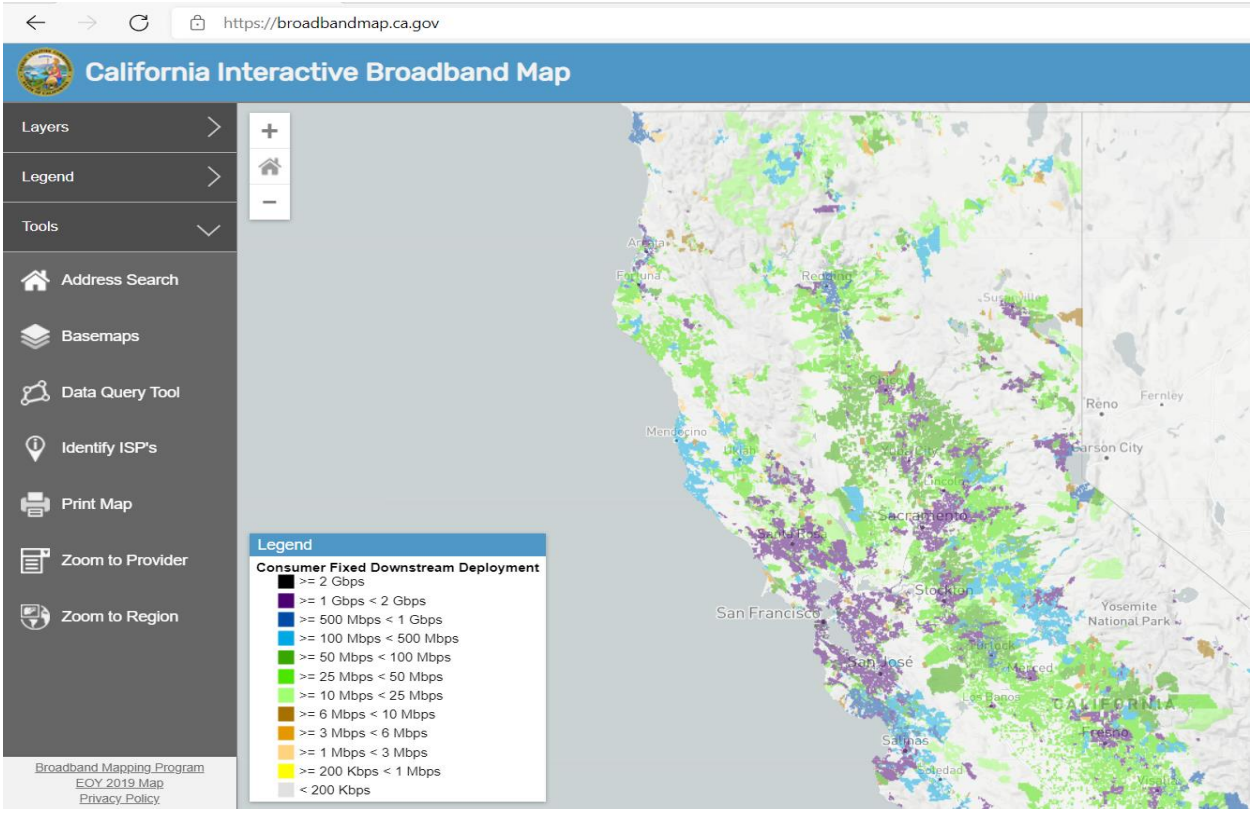
The CPUC collects broadband deployment and subscriber data once a year and displays validated deployment data on the California Interactive Broadband Map to provide Californians with a means to look up broadband speeds and service providers in their area.[18] The Map also provides information on funding eligibility by location for California Advanced Services Fund Infrastructure Account applicants. Equally important, the data inform public policies looking to bridge the digital divide in California.

[16] CPUC, "Last-Mile Broadband Fact Sheet," https://www.cpuc.ca.gov/-/media/cpuc-website/industries-and-topics/documents/telecommunications/broadband--fact-sheet_083021.pdf.

[17] California Public Utilities Commission §§275, 275.6.

[18] California Interactive Broadband Map, https://www.broadbandmap.ca.gov/.

Figure 1: Sample of California Interactive Broadband Map



The CPUC collects broadband data[19] as of the end of the prior calendar year from all communications providers certificated and/or registered with the CPUC in early April. The California Interactive Broadband Map is updated by December the same year. It includes a public feedback tool where people may report lack of service or slow service. That data is used to validate the next round of data in the following year and may be used to evaluate grant applications.

3.1.4 CalSPEED mobile broadband speed testing

In addition to the annual broadband data collection, the CPUC also administers a semi-annual statewide mobile field-testing program called "CalSPEED." CalSPEED uses the latest smartphones from the major mobile providers to measure mobile broadband at nearly 4,000 locations in California. Data points are interpolated across surfaces to estimate service performance and quality throughout the State. Results are shown in layers on the California Interactive Broadband Map. CalSPEED's software code is open source, and available to others to use or modify.

[19] Pursuant to legislation, including SB 156, SB 4, AB 41, SB 28, and AB 2752 codified in Public Utilities Code Sections 281(b)(4), 281.6 and 5895.

3.1.5 Summary table: The CPUC's current and past programs

The table below identifies the CPUC's current and recent activities and programs (including stakeholder engagement conducted for purposes of the BEAD Five-Year Plan); its previous statewide plans comprising goals for the availability of broadband; and its prior experience awarding broadband deployment grants. Additional details on all programs, accounts, and proceedings are available on the CPUC's website.

Table 1: Current and past activities of the CPUC

Activity name	Description	Intended outcome(s)
California Broadband for All Action Plan	Resulting from Executive Order N-73-20, this Plan was developed by the California Broadband Council, including designees from 12 diverse legislative and administrative California agencies and stakeholders. The Plan includes three long-term goals that all Californians have: 1. High-performance broadband available at home, schools, libraries, and businesses. 2. Access to affordable broadband and necessary devices. 3. Access to training and support to enable digital inclusion.	Serves as a roadmap for how to achieve California's long-term goals for broadband access and deployment. Includes actionable deliverables for various State agencies, including the CPUC as it relates to performance standards, leveraging assets, reliability standards, affordability, partnerships, data and mapping, and more. The BEAD program aligns with the State's existing Broadband for All Action Plan and will augment and expand the State's existing efforts to ensure every Californian is served by affordable and reliable broadband.
California Advanced Services Fund – Broadband Infrastructure Grant Account	A competitive grant program administered by the CPUC that is funded via a surcharge rate on the revenues collected by telecommunications carriers from end-users.	To provide broadband access to no less than 98% of California households in each consortia region. The program provides grants to subsidize the cost of last-mile, and some middle-mile, infrastructure to expand the State's broadband network.

Activity name	Description	Intended outcome(s)
California Advanced Services Fund – Line Extension Program	A competitive grant program administered by the CPUC that is funded via a surcharge rate on the revenues collected by telecommunications carriers from end-users.	To help individual household and/or property owner that meets a qualifying income threshold offset the costs of connecting a household or property to an existing or proposed facility-based broadband provider.
California Advanced Services Fund – Broadband Public Housing Account	A program administered by the CPUC that is funded via a surcharge rate on the revenues collected by telecommunications carriers from end-users.	To provide grants and low-cost loans to build networks offering free broadband service for residents of low-income communities including but not limited to, publicly supported housing developments, and other housing developments or mobile home parks with low-income residents.
California Advanced Services Fund – Broadband Adoption Account	A competitive grant program administered by the CPUC that is funded via a surcharge rate on the revenues collected by telecommunications carriers from end-users.	To increase publicly available or after-school broadband access and digital inclusion education through use of tools such as grants for digital literacy training programs and public education to communities with limited broadband adoption. The CPUC is required to give preference to programs and projects in communities with demonstrated low broadband access, including low-income communities, senior citizen communities, and communities facing socioeconomic barriers to broadband adoption.

Activity name	Description	Intended outcome(s)
California Advanced Services Fund – Rural and Urban Regional Broadband Consortia Grant Account	A program administered by the CPUC that is funded via a surcharge rate on the revenues collected by telecommunications carriers from end-users.	To provide grants to eligible consortia to facilitate deployment of broadband services by assisting CASF broadband infrastructure grant applicants in the project development or application process.
California Advanced Services Fund - Tribal Technical Assistance Grant Program	A program administered by the CPUC that is funded via a surcharge rate on the revenues collected by telecommunications carriers from end-users.	To provide grants to assist California Tribes in developing market studies, feasibilities studies, and/or business plans, which support Tribes in their pursuit of improved communications and broadband.

Activity name	Description	Intended outcome(s)
Middle-Mile Broadband Initiative (MMBI)	A $3.25 billion program administered by the California Department of Technology (CDT) to create an open-access middle-mile network. Responsible entities are CDT and the Office of Broadband and Digital Literacy, the CPUC, Caltrans, and GoldenStateNet. Network design and construction is monitored by the 12-member Middle-Mile Advisory Committee (MMAC).	To build the necessary infrastructure to bring internet connectivity to homes, businesses, and community institutions. The MMBI is an essential component of the State's Broadband for All efforts and will enable last-mile broadband infrastructure projects through reducing costs and providing middle-mile infrastructure where none exists. The CPUC is a participant in the MMAC, along with 11 other diverse State and local government agency members representing finance, transportation, and local government interests. MMAC facilitates cross-agency coordination and coordination of last-mile and middle-mile projects to support efficient use of State resources.
Federal Funding Account	A $2 billion competitive grant program administered by the CPUC and funded via SB 156.	To provide grants for last-mile broadband connectivity to unserved communities across California. Funding will be distributed across all California counties to ensure broad opportunities to advance both statewide and local broadband deployment goals.

Activity name	Description	Intended outcome(s)
Broadband Loan Loss Reserve Fund	A credit enhancement program administered by the CPUC and funded via SB 156.	To assist local governments, Tribes, and non-profits in securing enhanced private financing to construct and operate new public fiber networks.
Local Agency Technical Assistance	A grant program administered by the CPUC to support local capacity building.	Provides grants support to Tribes and local agencies in their efforts to expand broadband service to unserved and underserved Californians. For planning work that will facilitate high-speed broadband infrastructure projects.
Broadband Internet Caseworkers	CPUC field staff working across California to support local governments, Tribes, and community-based organizations considering applying to the CPUC's broadband programs.	Caseworkers provide seminars and expertise about grants, project planning, data and mapping, business models, and regulations. One-on-one technical assistance is also available.

Activity name	Description	Intended outcome(s)
California Broadband Council	The CPUC participates as a member of the 12-member Council which is facilitated by the California Department of Technology's Office of Broadband and Digital Literacy. The Council provides support through its member entities to further implementation of the California Broadband for All initiative.	The Council jointly developed the Broadband for All Action Plan that serves as the playbook for implementing the California Broadband for All initiative. The Council identifies State resources, encourages public and private partnerships, and recommends strategic policy to establish effective structures for providing world-class high-speed internet access throughout California. The CPUC is a member of this multi-agency Council that includes stakeholders from the Legislature, transportation, finance, public safety, agriculture, government services, Tribal, education, and libraries.
Data Collection and Mapping: California Interactive Broadband Map Federal Funding Account Public Map	The CPUC collects broadband availability data once a year and displays it on the California Interactive Broadband Map and the Federal Funding Account Public Map to provide Californians a means to look up broadband speeds and service providers in their area and to support applications for funding for broadband deployment projects. The CPUC also uses confidential subscriber data collected to validate deployment data submitted to FCC by service providers.	The Map provides information on funding eligibility by location for CASF Infrastructure Account applicants, based on that program's specific eligibility criteria. Equally important, the data inform public policies looking to bridge the digital divide in California. The CPUC also maintains a Federal Funding Account Public Map, which identifies unserved locations using the criteria established for that specific last-mile funding program.

Activity name	Description	Intended outcome(s)
Broadband Grants Portal	Established to serve as a complete life-cycle grant application and management platform for the $2 billion Last-Mile Federal Funding Account.	The CPUC plans on building-out the Portal, to develop additional modules for other SB 156 programs and CASF Programs. Likewise, the CPUC will build a module in this platform to manage BEAD applications and grants.
CalSPEED	Semi-annual statewide mobile field-testing program, uses the latest smartphones from the major mobile providers to measure mobile broadband at nearly 4,000 locations in California.	Estimate service performance and quality throughout the State. Results are shown in layers on the California Interactive Broadband Map.
California LifeLine Program	Provides monthly subsidy to low-income qualified participants for wireline or mobile voice and broadband services. Two LifeLine pilot programs launched in June 2023 – one for wireline broadband services and one for wireless broadband services – enable service providers to combine the California LifeLine and federal ACP subsidies.[20]	Works in tandem with federal Lifeline program, aiding broadband affordability.

[20] "CPUC Advances Broadband Affordability and Access in California," CPUC, June 8, 2023, https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-advances-broadband-affordability-and-access-in-california-2023.

Activity name	Description	Intended outcome(s)
California Teleconnect Fund	Provides 50 percent discount on advanced communication services to qualifying K-12 schools, libraries, community colleges, government-owned hospitals/health clinics, and community-based organizations.	Spurs broadband affordability.
California Broadband For All Portal[21]	Per the Broadband For All Action Plan, the Broadband for All Portal was established to be a central repository of information for broadband efforts in California. Currently managed by CDT to allow interested stakeholders to track each Broadband for All initiative and find planning resources and information.	Includes information on the State's broadband efforts to support transparency and capacity building. Includes detailed descriptions of last-mile funding programs, the middle-mile initiative, affordability programs, and work on the State's Digital Equity Plan. Also includes links to multiple broadband maps, funding opportunities, a speed test, planning toolkits, and environmental and permitting review resources.
Affordable Connectivity Program enrollment tracker[22]	Tracks numbers of California households eligible for and enrolled in ACP statewide, by county, and by ZIP code.	Provides ACP enrollment data for planning and outreach efforts.

3.1.6 Summary table: The CPUC's program staffing

The CPUC's staff has managed proceedings, needs assessments, and grant programs designed to identify and close the State's digital divide. The tables below identify a conceptual approach to the current and planned full- and part-time employees and contractors who will assist in implementing

[21] "California Broadband for All," https://broadbandforall.cdt.ca.gov/.

[22] "California Broadband for All: ACP enrollment tracker," https://broadbandforall.cdt.ca.gov/affordable-connectivity-program/acp-enrollment/.

and administering BEAD-funded activities and programs to achieve the CPUC's goals and objectives.

Because of the nature of the BEAD program—most notably, how quickly the program needs to be administered—and the CPUC's own decision-making process, the CPUC will need to staff up quickly to develop the infrastructure and systems necessary to run the challenge process and the BEAD grant-making process. The CPUC anticipates expanding its staffing through the application evaluation process, and likely will reduce staffing as it enters the grant management phase.

CPUC plans to expand staff using existing Commission funds to the extent possible so as to maximize the impact of BEAD funding through grant-making. In addition to the three existing staff positions funded by BEAD Initial Planning Funds, the CPUC anticipates adding approximately 17 full-time staff to handle tasks related to program management, program design, data analysis, application review, grant compliance.

This table addresses item 4 in the Five-Year Action Plan requirements: Employees and contract support.

Table 2: Current and planned full-time and part-time employees

Current/ planned	Full-time/ part-time	Position	Description of role
Current (Funded by BEAD-IPF Grant Award # 05-20-B278)	FT	Program and Project Supervisor	The Program and Project Supervisor (PPS) position will handle supervisory and project management duties for the BEAD planning activities. The position duties will include day-to-day project activities to oversee development of the 5-Year Action Plan, create and submit the Initial and Final Proposals, manage the contractor(s) and deliverables tied to each activity, and assist with hiring for a separate BEAD branch within the CPUC's Communications Division.

Current/ planned	Full-time/ part-time	Position	Description of role
Current (Funded by BEAD-IPF Grant Award # 05-20-B278)	FT	Public Utilities Regulatory Analyst V	The Senior Analyst position's duties will include hiring new staff, as well as serving as the lead analyst for the rulemaking that will define the rules and procedures for the BEAD subgrantee program.
Current (Funded by BEAD-IPF Grant Award # 05-20-B278)	FT	Staff Services Manager I (Outreach Coordinator)	The Outreach Coordinator position, Staff Services Manager I Specialist (SSM I) duties will include managing the public outreach activities (BEAD-IPF Activity 3); coordinating regularly with CDT; building relationships and strengthening existing partnerships with State, local, and regional stakeholders; developing communications and engagement materials; coordinating with subrecipients on any needed trainings and resources; and maintaining internal social media presence and messaging.
Planned	FT	17 staff members (estimated)	Limited-term employees who will be part of the CPUC's BEAD implementation team over the course of the program.

Table 3: Current and planned contractor support

Current/ planned	Full-time/ part-time	Position	Description of role
Current	FT	BEAD Program (BEAD-IPF Grant): Five-Year Plan and Initial Proposal Primary Contractor. (CPUC Agreement # 93788, issued to Columbia Telecommunications Corporation, dba CTC Technology & Energy, of Kensington, MD, 06/30/23).	Support the CPUC in writing its BEAD Five-Year Action Plan and Initial Proposal. The Scope of Work for this issued Agreement includes\ research, analysis, strategic guidance, and coordination with CPUC staff and other retained contractors on broadband and socioeconomic data and mapping production.
Current	FT	BEAD Program (BEAD-IPF Grant): Geographic Information Services (GIS) Consulting for Multi-Program Alignment. (CPUC Purchase Order # 6530 issued to SunstoneIT LLC of Roseville, CA, 06/23/23).	GIS analysis, data handling, data stewardship, and multi-site alignment and coordination within an ArcGIS environment.
Planned	FT	BEAD Program (BEAD-IPF Grant): Data processing, production of datasets, data analytics, production of public facing websites, dashboards, and mapping production.	Data processing contractor to support the CPUC's production requirements of the Five-Year Action Plan and identified elements of the Initial Proposal.
Planned	FT	BEAD Program (BEAD-IPF Grant): Updates to the California Broadband Cost Model required for BEAD planning phase, including analysis of High-Cost, Extremely High-Cost, and associated data, with dataset production, GIS information, and policy advisory services as required.	IT-related professional services to support CPUC's BEAD planning requirements relating to California Broadband Cost Model updates as required in the listed phases of the BEAD Program.

Current/ planned	Full-time/ part-time	Position	Description of role
Planned	FT	IT platform contractor	Contractor to develop the CPUC's grant management system, to accommodate both the Federal Funding Account (FFA), and the BEAD Program.
Planned	FT	IT platform contractor	Contractor to develop the CPUC's State Challenge Process Portal.
Planned	FT	Communications specialist	Contractor to support communications and engagement.

3.1.7 Summary table: The CPUC's available funding

The table below identifies the CPUC's currently available funding for broadband deployment and other broadband-related activities. For all SB 156 Programs and CASF Account Programs, the information provided in the table is based on an 'as of date' of August 25, 2023.

The CPUC received grant applications for the CASF Infrastructure Grant Account on June 1, 2023, and will be evaluating applications for funding, with a Commission decision on applications by late 2023.

In addition, the CPUC received grant applications for the CASF Adoption Account, the Public Housing Account, and Tribal Technical Assistance on July 3, 2023. The CPUC will consider these applications over the coming months and will make a funding determination by the end of 2023.

The Last-Mile Federal Funding Account opened its first round of funding on June 30, 2023, with the window remaining open until September 29, 2023. The CPUC has 180 days from the time the window closes to make determinations regarding all applications received.

The CPUC announced grant awards under its Digital Divide Grant Program on August 10, 2023. These awards expended the majority of available funds from the program. The CPUC stated that it will evaluate the success of the pilots at the end of the grant-funded term in November 2024 and consider opening an additional round of funding at that time.

The following table lists additional federal funding programs that support broadband access in unserved areas of California through infrastructure projects and adoption, workforce, and digital equity programs. The table includes programs administered by agencies other than the CPUC.

Table 4: Broadband funding

Source	Purpose	Total	Expended	Available
CPUC Last - Mile Federal Funding Account*	Fund last-mile broadband infrastructure projects in every county. The FY 21/22 funds must be allocated by the CPUC by December 31, 2024, and are available for encumbrance, expenditure, and liquidation until December 31, 2026. The FY 22/23 funds must be allocated by the CPUC by December 31, 2025, and are available for encumbrance, expenditure, and liquidation until December 31, 2027. The FY 23/24 funds must be allocated by the CPUC by December 31, 2026, and are available for encumbrance, expenditure, and liquidation until December 31, 2028.	Almost $2 billion over the life of the program, including over $540 million in American Rescue Plan Capital Projects Fund monies.	$0 (First application window for the program closes on September 29, 2023)	$1,338,807, 909 of the almost $2 billion is available for granting during the current budget cycle.
CPUC Local Agency Technical Assistance	Grants support Tribes and local agencies in their efforts to expand broadband service to unserved and underserved Californians. For planning work that will facilitate high-speed broadband infrastructure projects.	$50,000,000 (Funded from the Last-Mile Federal Funding Account program)	$50,000,000 (As of July 1, 2023, all funds have been allocated or requested)	$0
CPUC Loan Loss Reserve**	Enable local governments, Tribal entities, and nonprofits to secure financing for broadband infrastructure	$175,000,000 for FY 23/24	$0	$175,000,000

Source	Purpose	Total	Expended	Available
CPUC CASF Infrastructure Account ***	Subsidies to build broadband infrastructure in unserved parts of California, particularly in areas with barriers to access	$32,769,000 for FY 23/24	$0 expended for FY 23/24 as of August 25, 2023	$32,769,000
CPUC CASF Line Extension Account ***	Helps individual household and/or property owner offset the costs of connecting a household or property to an existing or proposed facility-based broadband provider	$688,000 for FY 23/24	$0 expended for FY 23/24 as of August 25, 2023	$688,000
CPUC CASF Public Housing Account ***	Grants to build broadband offering free service for low-income communities including publicly supported housing developments, and other housing developments or mobile home parks with low-income residents	$15,000,000 for FY 23/24	$0 expended for FY 23/24 as of August 25, 2023	$15,000,000
CPUC CASF Adoption Account***	Grants for broadband access and digital inclusion education, such as grants for digital literacy training programs and public education to communities with limited broadband adoption	$20,024,000 for FY 23/24	$0 expended for FY 23/24 as of August 25, 2023	$20,024,000

Source	Purpose	Total	Expended	Available
CPUC CASF Rural and Urban Regional Broadband Consortia Grant Account***	Grants to support eligible consortia to facilitate deployment of broadband services in regional and local communities including technical support for applicants to State programs in project development and application processes. In January 2023, the CPUC distributed $10.333 million to 15 regional consortia for work over the next three to five years.	$1,830,000 for FY 23/24 (to support remaining unrepresented regional consortia)	$0 expended for FY 23/24 as of August 25, 2023	$1,830,000
CPUC CASF Tribal Technical Assistance***	Grants to assist California Tribes in developing market studies, feasibilities studies, and/or business plans, which support Tribes in their pursuit of improved communications and broadband	$2,300,000 for FY 23/24	$0 expended for FY 23/24 as of August 25, 2023	$2,300,000
CPUC Digital Divide Grant Program	Grant program supported through a percentage of revenues generated from lease agreement for wireless telecommunications facilities located on State-owned property. Funding is restricted to digital divide projects.	$1,2000,000	$999,470 (4 grants awarded in 2023, Resolution T-17794)	$200,530

Source	Purpose	Total	Expended	Available
NTIA Broadband Equity, Access, and Deployment —Initial Planning Funding	The NTIA issued funds to the CPUC on 12/01/22 under the Initial Planning Funding phase of the BEAD Program (BEAD-IPF). This award is for personnel resources at CPUC to build the capacity of Commission staff assigned to BEAD planning duties. Additionally, the funding will be used by the CPUC to retain contractors to assist in writing the BEAD Five-Year Action Plan, and the first elements of the BEAD Initial Proposal.	$4,996,502	$1,709,979 total funds obligated and expended as of August 25, 2023	$3,286,523
NTIA Broadband Equity, Access, and Deployment	BEAD funding allocation	$1,864,136,508.93	$0	$1,864,136,508.93
NTIA Connecting Minority Communities Pilot Program****	Nine grants awarded to California colleges and institutions that serve minority and Tribal communities to support broadband access and digital equity for students and the surrounding communities	$26,410,328	N/A[23]	N/A
NTIA Tribal Broadband Connectivity Program****	34 grants to support federally recognized Tribal governments bringing high-speed internet to Tribal lands in California	$162,526,229	N/A	N/A

[23] N/A is listed for resources available to the State of California, but for which the CPUC has no direct administration responsibility.

Source	Purpose	Total	Expended	Available
NTIA Enabling Middle Mile Broadband Infrastructure Grant Program****	Grant funding to the California Department of Technology to support additional miles of fiber for the statewide open access middle mile network, bringing the state project closer to unserved locations and anchor institutions	$73,000,000	N/A	N/A
USDA ReConnect Program****	Grant and loan funds awarded FY 2022 and 2023 to five projects that will connect rural residents, farmers, anchor institutions, and business owners to high-speed internet through fiber-to-the-premises facilities in multiple rural counties.	$90,813,413	N/A	N/A

*The Federal Funding Account opened for its first funding cycle on June 30, 2023, with the window staying open until September 29, 2023. The CPUC has up to 180 days from the time the window closes to make determinations on all applications. This account includes $540,249,909 in American Rescue Plan Capital Projects Fund monies awarded to California.

**The Loan Loss Reserve is still in development by the Commission and is expected to begin accepting applications in 2024.

***Assumes new FY 23/24 starting balances based on approved budget (CPUC Resolution T-17782, June 8, 2023). Amounts budgeted for all CASF programs are available for encumbrance for three years and available for expenditure for two years after that. The FY 23/24 CASF funds are available for encumbrance until June 30, 2026, and available for expenditure until June 30, 2028.

**** Data regarding program expenditures are unavailable to the CPUC as the program is not administered by the CPUC and grantees report data to other agencies.

3.2 Partnerships

The table below identifies a representative sampling of the CPUC's current and potential future partners in the development and implementation of this Plan. These partners include organizations already engaged in broadband deployment and digital inclusion efforts (e.g., local governments, Tribes, K-12 schools, higher education, ISPs) and entities the CPUC has identified as potential future collaborators.

As noted elsewhere in this Plan, the CPUC is the Eligible Entity for the State's Five-Year Action Plan—while the California Department of Technology (CDT) is responsible for preparing the State's Digital Equity Plan. The CPUC and CDT are closely collaborating on these efforts, which naturally include joint outreach and engagement with local communities and other potential partners.

Some of the entities identified in this table are partners with which the CPUC is already working closely, while others are entities that the CPUC hopes will become strong partners. The table thus represents a sample of the range of potential partners and types of partners the CPUC will engage as it implements the Five-Year Action Plan. The CPUC also considers as partners the many entities to which it has awarded grant funding through current and past programs; details on those recipients are available on the CPUC's website.

As it identifies new partners, the CPUC will incorporate its Environmental and Social Justice Action Plan as a guide and, as it has in the past, will take specific and intentional steps to reach out to community leaders in communities of color and disadvantaged communities and to partners representing covered populations.

Regional-Local Workshop participants made similar key recommendations for the CPUC to partner with community-based organizations and other entities that serve (and that are trusted by) covered populations and historically underrepresented communities for ongoing input and communication.

Table 5: Partners

Partners	Description of current or planned role in broadband deployment and adoption
California Department of Technology (CDT)[24]	CDT oversees the coordination and implementation of the Broadband for All program and initiatives through the California Broadband Council, which it chairs. Per the Action Plan, CDT leads statewide efforts to enhance permitting at all levels of government, leverage State contracting vehicles, leads efforts to promote and track adoption of low-cost service options and the Affordable Connectivity Plan, developed and manage a multi-level network of digital inclusion entities in the state, developed and maintains the State's Broadband For All Portal and provides guidance to State departments and agencies to incorporate broadband into their strategic plans. As directed by SB 156, CDT (through its Office of Broadband and Digital Literacy) is overseeing the acquisition and management of contracts for development, construction, operation, and maintenance of the Middle-Mile Broadband Network, and has retained a Third-Party Administrator (TPA) to manage the construction and operation of the network. CDT has also created the nine-member Middle-Mile Advisory Committee to monitor the project.[25] Per Assembly Bill 2750, CDT is the State's Digital Equity Entity responsible for preparing the State's Digital Equity Plan administering the Digital Equity program.
California Department of Education (CDE)	CDE is a member of the California Broadband Council and supports the implementation of the Broadband for All Action Plan. Responsibilities include Goal 1 (All Californians have high-performance broadband available at home, schools, libraries, and businesses), Goal 2 (All Californians have access to affordable broadband and the devices necessary to access the internet), and Goal 3 (All Californians can access training and support to enable digital inclusion).

[24] "About," CDT, https://cdt.ca.gov/about/.

[25] "Middle-Mile Broadband Initiative," Broadband for All, https://broadbandforall.cdt.ca.gov/middle-mile-broadband-initiative/.

Partners	Description of current or planned role in broadband deployment and adoption
California State Library (CSL)	CSL is a member of the California Broadband Council and supports the implementation of the Broadband for All Action Plan. Responsibilities include Goal 1 (All Californians have high-performance broadband available at home, schools, libraries, and businesses), Goal 2 (All Californians have access to affordable broadband and the devices necessary to access the internet), and Goal 3 (All Californians can access training and support to enable digital inclusion). CSL conducts extensive digital equity initiatives in the State, including a Digital Navigator Program and California Library Connect, a high-speed broadband infrastructure program aimed at connecting all California libraries to gigabit speeds.
California Department of Housing and Community Development (HCD)	Supports the implementation of the Broadband for All Action Plan. Responsibilities include Goal 1 (All Californians have high-performance broadband available at home, schools, libraries, and businesses), Goal 2 (All Californians have access to affordable broadband and the devices necessary to access the internet), and Goal 3 (All Californians can access training and support to enable digital inclusion). Per Action Item 15 of the Broadband for All Action Plan, HCD leads the effort to leverage existing Housing and Community Development programs to provide free broadband service for tenants in newly built housing and publicly subsidized units.
Governor's Office of Business and Economic Development (GO-Biz)	Supports the implementation of the Broadband for All Action Plan. Responsibilities include Goal 1 (All Californians have high-performance broadband available at home, schools, libraries, and businesses), Goal 2 (All Californians have access to affordable broadband and the devices necessary to access the internet), and Goal 3 (All Californians can access training and support to enable digital inclusion). Per Action Item 2 of the Broadband for All Action Plan, Go-Biz leads the effort to Identify alternative financing opportunities with government and philanthropic partners to maximize funding for new infrastructure.

Partners	Description of current or planned role in broadband deployment and adoption
California State Transportation Agency (CalSTA)	CalSTA is a Broadband Council member and supports the implementation of the Broadband for All Action Plan. Per Action Items 4 and 5 CalSTA was directed to and completed the development a statewide Dig Smart policy and improved State encroachment permitting processes and rights-of-way management.[26] The California Department of Transportation (Caltrans) within CalSTA will also work with the Third-Party Administrator to manage construction of the Middle-Mile Broadband Network along State highways and rights-of-way.
Department of General Services (DGS)	DGS is a member of the California Broadband Council and supports the implementation of the Broadband for All Action Plan. Responsibilities include Goal 1 (All Californians have high-performance broadband available at home, schools, libraries, and businesses), Goal 2 (All Californians have access to affordable broadband and the devices necessary to access the internet), and Goal 3 (All Californians can access training and support to enable digital inclusion). Per Action Item 7, DGS is leading the State's effort to identify State property for possible use for broadband infrastructure.
California Office of Emergency Services (OES)	OES is a member of the California Broadband Council and supports the implementation of the Broadband for All Action Plan. Responsibilities include Goal 1 (All Californians have high-performance broadband available at home, schools, libraries, and businesses). Per Action Item 8, OES Regularly coordinates and convenes with jurisdictions implementing next-generation 9-1-1 to expand broadband infrastructure.

[26] "Wired Broadband Facilities on State Highway Right of Way," Caltrans, https://dot.ca.gov/programs/design/wired-broadband.

Partners	Description of current or planned role in broadband deployment and adoption
California Department of Aging (CDA)	Supports the implementation of the Broadband for All Action Plan. Responsibilities include Goal 1 (All Californians have high-performance broadband available at home, schools, libraries, and businesses), Goal 2 (All Californians have access to affordable broadband and the devices necessary to access the internet), and Goal 3 (All Californians can access training and support to enable digital inclusion). Per Action Item 15, CDA leads the effort to analyze the needs of the aging population for access to affordable, reliable, high-speed broadband, and identify programmatic and partnership opportunities to meet these needs.
California Government Operations Agency (GovOps)	GovOps is the parent agency to CDT and many executive branch entities and provides advice and guidance on the State's Broadband for All program.
California Department of Public Health (CDPH)	Supports the implementation of the Broadband for All Action Plan. Responsibilities include Goal 1 (All Californians have high-performance broadband available at home, schools, libraries, and businesses), Goal 2 (All Californians have access to affordable broadband and the devices necessary to access the internet), and Goal 3 (All Californians can access training and support to enable digital inclusion). CDPH is a member of the Statewide Digital Equity Planning and Implementation Group.
California Department of Social Services (DSS)	Supports the implementation of the Broadband for All Action Plan. Responsibilities include Goal 1 (All Californians have high-performance broadband available at home, schools, libraries, and businesses), Goal 2 (All Californians have access to affordable broadband and the devices necessary to access the internet), and Goal 3 (All Californians can access training and support to enable digital inclusion). DSS is a member of the Statewide Digital Equity Planning and Implementation Group.

Partners	Description of current or planned role in broadband deployment and adoption
California Department of Food and Agriculture (CDFA)	CDFA is a member of the California Broadband Council and supports the implementation of the Broadband for All Action Plan. Responsibilities include Goal 1 (All Californians have high-performance broadband available at home, schools, libraries, and businesses), Goal 2 (All Californians have access to affordable broadband and the devices necessary to access the internet), and Goal 3 (All Californians can access training and support to enable digital inclusion).
California Labor and Workforce Development Agency (LWDA)	LWDA is a member of the Statewide Digital Equity Planning and Implementation Group and supports the implementation of the Broadband for All Action Plan. Responsibilities include Goal 1 (All Californians have high-performance broadband available at home, schools, libraries, and businesses), Goal 2 (All Californians have access to affordable broadband and the devices necessary to access the internet), and Goal 3 (All Californians can access training and support to enable digital inclusion).
California Workforce Development Board	Supports workforce development support and innovation, policy development, and driven by objectives from California's Unified Strategic State Plan to foster skills attainment programs, enable upward mobility for all Californians and coordinating programs and services to this end. The Workforce Development Board administers the "High Road Training Partnerships" initiatives designed to develop partnerships strategies for industry-based, worker-focused training and skills building programs that promote innovation and investment in human capital.
Governor's Office of Planning and Research (OPR)	Supports the implementation of the Broadband for All Action Plan. Responsibilities include Goal 1 (All Californians have high-performance broadband available at home, schools, libraries, and businesses), Goal 2 (All Californians have access to affordable broadband and the devices necessary to access the internet), and Goal 3 (All Californians can access training and support to enable digital inclusion).
California Natural Resources Agency (CNRA)	Supports the implementation of the Broadband for All Action Plan and plays a key role in Action Item 6 to enhance permitting processes at all levels of government.

Partners	Description of current or planned role in broadband deployment and adoption
California Environmental Protection Agency (Cal EPA)	Supports the implementation of the Broadband for All Action Plan.
California Business, Consumer Services and Housing Agency	Supports the implementation of the Broadband for All Action Plan. Responsibilities include Goal 1 (All Californians have high-performance broadband available at home, schools, libraries, and businesses), Goal 2 (All Californians have access to affordable broadband and the devices necessary to access the internet), and Goal 3 (All Californians can access training and support to enable digital inclusion).
University of California	The University of California improves the lives of people in California and around the world through world-class educational opportunities, groundbreaking research, top-rated health care and agricultural expertise. UC consists of ten campuses, six academic health centers, three research laboratories, and 294,309 students. UC was a significant contributor in the joint Digital Equity and BEAD planning process and will be a critical implementation partner.
California State University (CSU)	The nation's most diverse four-year university—ethnically, economically and academically—consists of 23 campuses and educates nearly 460,000 students annually. CSU was a significant contributor in the CPUC and CDT's joint Digital Equity and BEAD planning process and will be a critical implementation partner.
California Community Colleges (CCC)	With 1.8 million students attending 116 colleges, CCC's mission is to provide students with the knowledge and background necessary to compete in today's economy. CCC was a significant contributor in the CPUC and CDT's joint Digital Equity and BEAD planning process and will be a critical implementation partner.

Partners	Description of current or planned role in broadband deployment and adoption
Corporation for Education Network Initiatives in California (CENIC)	Established in 1997, CENIC operates the California Research and Education Network (CalREN), a high-capacity network with more than 8,000 miles of optical fiber. The network serves over 20 million users across California at over 12,000 institutions, including the vast majority of K-20 students together with educators, researchers, clinicians, and individuals at other vital public-serving institutions. Currently CENIC manages the Broadband Infrastructure Grant from the California Department of Education to bring fiber-based broadband solutions to K-12 public schools lacking fiber connections.
California Emerging Technology Fund (CETF)	A non-profit corporation for the purpose of achieving ubiquitous access to broadband and advanced services in California by forging strategic partnerships and collaboration with civic leaders and community organizations; CETF focuses on: • Rural communities that lack broadband infrastructure. • Urban poor and disadvantaged communities that lack computers and affordable connections to the Internet with relevant applications. • Disabled populations that lack technology accessibility (which will be addressed in part by promoting universal design of all technology to be accessible and integrating accessibility into all efforts).[27] CETF is a member of the California Broadband Council and contributes to the implementation of the Broadband for All Action Plan. CTEF co-leads the State's Get Connected! California Affordable Connectivity Program statewide mobilization effort in partnership with CDT, CPUC, and other California Broadband Council members.

[27] "Mission and History," CETF, https://www.cetfund.org/about-us/mission-and-history/.

Partners	Description of current or planned role in broadband deployment and adoption
Internet service providers	The CPUC received dozens of proposals in June 2023 for projects to be funded by the CASF infrastructure Account—demonstrating the potential range of ISPs interested in partnering on broadband deployment across the State.[28] ISPs have also been a critical part of the public input and dialogue regarding State policy and planning for broadband deployment and they are expected to continue their participation going forward.
Broadband Consortium of the Pacific Coast[29]	A group of local civic organizations that support broadband deployment and can play a key role in outreach and engagement. Recipient of California Emerging Technology Fund (CETF) grant from the CPUC to augment California Advanced Services Fund (CASF) work.[30]
Central Coast Broadband Consortium[31]	A group of local civic organizations that support broadband deployment and can play a key role in outreach and engagement. Disseminates information about ACP, Lifeline, and public Wi-Fi. Recipient of CASF grant from the CPUC.[32]
Central Sierra Economic Development District[33]	A group of local civic organizations that support broadband deployment and can play a key role in outreach and engagement. Recipient of CASF grant from the CPUC.[34]

[28] "CASF Infrastructure Project Summaries," CPUC, June 1, 2023, https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/california-advanced-services-fund/casf-infrastructure-project-summaries.

[29] Broadband Consortium of the Pacific Coast, http://pcbroadband.org/.

[30] "Annual Work Plan and Performance Metrics Plan," Broadband Consortium Of The Pacific Coast, January 12, 2023, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/casf-adoption-and-access/consortia/t17778-documents/bcpc-t17778-work-plan.pdf.

[31] Central Coast Broadband Consortium, https://centralcoastbroadbandconsortium.org/.

[32] "Annual Work Plan and Performance Metrics Plan," Central Coast Broadband Consortium, January 12, 2023, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/casf-adoption-and-access/consortia/t17778-documents/ccbc-t17778-work-plan.pdf.

[33] Central Sierra Economic Development District, https://www.csedd.org/.

[34] "Annual Work Plan and Performance Metrics Plan," Central Sierra Economic Development District, January 13, 2023, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/casf-adoption-and-access/consortia/t17778-documents/csbuz-t17778-work-plan.pdf.

Partners	Description of current or planned role in broadband deployment and adoption
Connected Capital Area Broadband Consortium[35]	A group of local civic organizations that support broadband deployment and can play a key role in outreach and engagement. Activities include support for ACP enrollment. Recipient of CASF grant from the CPUC.[36]
Gold Country Broadband Consortium[37]	A group of local civic organizations that support broadband deployment and can play a key role in outreach and engagement. Recipient of CASF grant from the CPUC.[38]
Inland Empire Regional Broadband Consortium[39]	A group of local civic organizations that support broadband deployment and can play a key role in outreach and engagement. Recipient of CASF grant from the CPUC.[40]
Inyo-Mono Broadband Consortium[41]	A group of local civic organizations that support broadband deployment and can play a key role in outreach and engagement. Recipient of CASF grant from the CPUC.[42]

[35] Connected Capital Area Broadband Consortium, https://www.valleyvision.org/projects/connected-community-initiative/.

[36] "Annual Work Plan and Performance Metrics Plan," Connected Capital Area Broadband Consortium, January 12, 2023, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/casf-adoption-and-access/consortia/t17778-documents/ccabc-t17778-work-plan.pdf.

[37] Gold Country Broadband Consortium, https://www.sierrabusiness.org/archives/gold-country-broadband-consortium/.

[38] "Annual Work Plan and Performance Metrics Plan," Gold Country Broadband Consortium, January 12, 2023, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/casf-adoption-and-access/consortia/t17778-documents/gcbc-t17778-work-plan.pdf.

[39] Inland Empire Regional Broadband Consortium, http://www.iebroadband.com/.

[40] "Annual Work Plan and Performance Metrics Plan," Inland Empire Regional Broadband Consortium, January 12, 2023, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/casf-adoption-and-access/consortia/t17778-documents/ierbc-t17778-work-plan.pdf.

[41] Inyo-Mono Broadband Consortium, https://escog.ca.gov/inyomono-broadband-consortium.

[42] "Annual Work Plan and Performance Metrics Plan," Inyo-Mono Broadband Consortium, January 12, 2023, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/casf-adoption-and-access/consortia/t17778-documents/imbc-t17778-work-plan.pdf.

Partners	Description of current or planned role in broadband deployment and adoption
Los Angeles Digital Equity Action League[43]	A group of local civic organizations that support broadband deployment and can play a key role in outreach and engagement. Recipient of CASF grant from the CPUC.[44]
North Bay/North Coast Broadband Consortium[45]	A group of local civic organizations that support broadband deployment and can play a key role in outreach and engagement. Recipient of CASF grant from the CPUC.[46]
Northeastern California Connect Consortium[47]	A group of local civic organizations that support broadband deployment and can play a key role in outreach and engagement. Recipient of CASF grant from the CPUC.[48]
Redwood Coast Connect Broadband Consortium[49]	A group of local civic organizations that support broadband deployment and can play a key role in outreach and engagement. Recipient of CASF grant from the CPUC.[50]

[43] Los Angeles Digital Equity Action League, https://ladeal.org/. Convened by Los Angeles County Economic Development Corporation (LAEDC) (https://laedc.org/) and UNITE-LA (https://www.unitela.com/).

[44] "Annual Work Plan and Performance Metrics Plan," Los Angeles Digital Equity Action League, January 12, 2023, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/casf-adoption-and-access/consortia/t17778-documents/ladeal-t17778-work-plan.pdf.

[45] North Bay / North Coast Broadband Consortium, https://www.nbncbc.org/home.

[46] "Annual Work Plan and Performance Metrics Plan," North Bay / North Coast Broadband Consortium, January 12, 2023, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/casf-adoption-and-access/consortia/t17778-documents/nbncbc-t17778-work-plan.pdf.

[47] Northeastern California Connect Consortium, https://necalbroadband.org/.

[48] "Annual Work Plan and Performance Metrics Plan," Northeastern California Connect Consortium, January 12, 2023, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/casf-adoption-and-access/consortia/t17778-documents/neccc-t17778-work-plan.pdf.

[49] Redwood Coast Connect, https://redwoodcoastruralaction.org/the-work/redwood-coast-connect/.

[50] "Annual Work Plan and Performance Metrics Plan," Redwood Coast Connect Broadband Consortium, January 12, 2023, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/casf-adoption-and-access/consortia/t17778-documents/rcbc-t17778-work-plan.pdf.

Partners	Description of current or planned role in broadband deployment and adoption
San Joaquin Valley Regional Broadband Consortium[51]	A group of local civic organizations that support broadband deployment and can play a key role in outreach and engagement. Recipient of CASF grant from the CPUC.[52]
Southern Border Broadband Consortium[53]	A group of local civic organizations that support broadband deployment and can play a key role in outreach and engagement. Recipient of CASF grant from the CPUC.[54]
Tahoe Basin Project's Connected Tahoe project[55]	A group of local civic organizations that support broadband deployment and can play a key role in outreach and engagement. Recipient of CASF grant from the CPUC for Connected Tahoe project.[56]
Upstate California Connect Consortium[57]	A group of local civic organizations that support broadband deployment and can play a key role in outreach and engagement. Recipient of CASF grant from the CPUC for Connected Tahoe project.[58]

[51] San Joaquin Valley Regional Broadband Consortium, http://www.sjvpartnership.org/work-groups/advanced-communications-services/.

[52] "Annual Work Plan and Performance Metrics Plan," San Joaquin Valley Regional Broadband Consortium, January 12, 2023, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/casf-adoption-and-access/consortia/t17778-documents/sjvrbc-t17778-work-plan.pdf.

[53] Southern Border Broadband Consortium, https://www.ivedc.com/initiatives/broadband.

[54] "Annual Work Plan and Performance Metrics Plan," Southern Border Broadband Consortium, January 12, 2023, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/casf-adoption-and-access/consortia/t17778-documents/sbbc-t17778-work-plan.pdf.

[55] "Connected Tahoe," Tahoe Prosperity Center, https://tahoeprosperity.org/connected-tahoe/.

[56] "Annual Work Plan and Performance Metrics Plan," Tahoe Basin Project, January 12, 2023, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/casf-adoption-and-access/consortia/t17778-documents/tbp-t17778-work-plan.pdf.

[57] Upstate California Connect Consortium, https://upcalbroadband.org/.

[58] "Annual Work Plan and Performance Metrics Plan," Upstate California Connect Consortium, January 12, 2023, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/casf-adoption-and-access/consortia/t17778-documents/uccc-t17778-work-plan.pdf.

Partners	Description of current or planned role in broadband deployment and adoption
Rural County Representatives of California (RCRC)	RCRC is a 40-member service organization that champions policies on behalf of California's rural counties. RCRC provides the rural county perspective on a myriad of issues during the legislative and regulatory process, including land use, water and natural resources, housing, transportation, wildfire protection policies, and health and human services. The core of RCRC's mission is to improve the ability of small, rural California county government to provide services by reducing the burden of state and federal mandates, and promoting a greater understanding among policy makers about the unique challenges that face California's small population counties.[59]

3.3 Asset inventory

This section catalogs and describes a sample of broadband deployment (infrastructure), broadband adoption, broadband affordability, broadband access, and digital equity activities across the State of California. These inventories comprise agencies that have hard assets, such as utility poles and land, and soft assets such as programs and activities that aim to close the digital divide.

These inventories are not exhaustive in their scope; rather, they focus on the types of assets the CPUC believes may play a role in implementing this Plan. Additional asset inventory data, including for digital equity activities, are included in Appendix A.

This section addresses item 6 in the Five-Year Action Plan requirements: Asset inventories.

3.3.1 Broadband deployment

The table below lists examples of the types of State-owned structures, land, rights-of-way, utility poles, conduit, fiber, and other assets that might be leveraged to implement the Five-Year Action Plan. As the CPUC continues its broadband data gathering and deployment planning, it will reach out to key State agencies to coordinate opportunities to leverage these assets in critical unserved areas of the State. A discussion of available workforce assets to deploy broadband is in Section 3.4.1.

[59] RCRC, https://www.rcrcnet.org/about-rcrc.

Table 6: Broadband deployment assets

Asset name	Description
California Middle-Mile Broadband Network (MMBN)	Fiber strands will be available on the State's planned open-access statewide Middle-Mile Broadband Network (MMBN); ISPs will be able to lease backbone fiber throughout the State. MMBN project locations were chosen to facilitate last-mile connections, with a direct focus on unserved areas, and are also in locations with middle-mile infrastructure that currently lacks sufficient open access, capacity, and affordable rates.
State-owned land	Land owned by State entities may be available for placement of huts or other broadband infrastructure. Per Action Item 7 of the California Broadband for All Action Plan, the Department of General Services (DGS) is leading the State's effort to identify State property for possible use for broadband infrastructure.
State-owned buildings	Buildings owned by State entities may be available for placement of network electronics or other broadband infrastructure. Per Action Item 7 of the California Broadband for All Action Plan, the Department of General Services (DGS) is leading the State's effort to identify State property for possible use for broadband infrastructure.
State-owned and utility towers	Towers owned by the State and other entities such as public and investor-owned utility companies and telecommunications companies may be available for placement of antennas or other broadband infrastructure.
Rights-of-way	Rights-of-way controlled by the State may be available for placement of fiber, huts, or other broadband infrastructure.

In addition, to meet objectives of the Broadband for All Action Plan goal of broadband availability, the California State Transportation Agency has implemented a Dig Smart policy to install conduit as part of any appropriate and feasible State-funded transportation project in strategic corridors, as well as improving State encroachment permitting processes and rights-of-way management, as needs or opportunities are identified, to accelerate broadband deployment.[60]

[60] "Action Plan progress tracker," California Broadband for All, https://broadbandforall.cdt.ca.gov/progress-tracker/.

Additionally, the State Legislature has directed all State agencies to work in cooperation to expedite delivery and permitting of the MMBN and has developed a streamlined process for procurement and State contracting to support MMBN and the State's related broadband policy goals.[61]

The CPUC will maintain cross-agency coordination with CDT regarding the timing and locations for both last-mile and middle-mile projects. The CPUC also appreciates the commitment from the Legislature to continue to consider strategies to streamline State and local permitting to support effective and efficient broadband construction; the CPUC will continue to monitor best practices and local coordination efforts to inform these efforts.

3.3.2 Broadband adoption

This section describes the current state of broadband adoption (i.e., the percentage of residents who have adopted broadband) and identifies broadband adoption assets. This section addresses item 8 in the Five-Year Action Plan requirements: Broadband availability and adoption data.

According to the most recent NTIA data (November 2021), 76.4 percent of California residents use internet at home[62] and 81.2 percent of residents use internet at any location.[63]

The table below lists a representative sample of programs that promote broadband adoption—such as through digital literacy and digital skills training, public computing labs, device and hotspot loans, K-12 schools with one-to-one computer programs, computer refurbishing efforts, and other broadband awareness and outreach efforts. These assets are available to most covered populations and historically underrepresented communities. Additional assets are included in Appendix A, and the CPUC will continue seeking to identify broadband adoption assets.

The California Department of Technology (CDT) is also developing broadband adoption asset inventories as part of its parallel effort to develop the State's Digital Equity Plan. Additional broadband adoption assets will be identified by CDT in that Plan.

Table 7: Broadband adoption assets

Asset name	Description
Broadband Adoption Account	Provides grants to increase publicly available or after-school broadband access and digital inclusion.

[61] California Government Code §§11549.55, 11549.56 (SB 156).

[62] "Digital Nation Data Explorer: Internet Use at Home," NTIA, November 2021 data, https://ntia.gov/other-publication/2022/digital-nation-data-explorer.

[63] "Digital Nation Data Explorer: Internet Use (Any Location)," NTIA, November 2021 data, https://ntia.gov/other-publication/2022/digital-nation-data-explorer.

Asset name	Description
Broadband Public Housing Account	Awards grants to low-income communities to finance projects to connect broadband networks that offer free broadband service.
Rural and Urban Regional Broadband Consortia Account	Facilitates deployment of broadband services by assisting CASF infrastructure grant applicants in project development.
Deaf and Disabled Telecommunications Program	Provides specialized telecommunications equipment, speech generating devices, and relay services to qualified Californians.
Get Connected CA! Statewide ACP Mobilization	Led by CDT, CPUC, CETF, and other Broadband Council members this effort is driving and tracking enrollment in the FCC's Affordable Connectivity Program.
FCC ACP Outreach Grants	15 State and local entities have received almost $6 million in FCC ACP outreach grants to raise awareness, conduct direct notification, and provide enrollment assistance in the ACP program. CDT, CETF, and numerous local entities are grant recipients.
Oakland Public Library	Offers Wi-Fi hotspot loans[64] and has computers available for use.[65]
Tech Exchange	This Bay Area organization provides affordable computers, technology support, and digital literacy training, and helps community members access the internet. It accepts donations and resells refurbished devices at a discount.[66]
San Diego Futures Foundation	Offers low-cost refurbished computers for under-resourced community members and nonprofits in San Diego, as well as adaptive technology and digital skills training.[67]
Stockton-San Joaquin County Public Library	Offers free Wi-Fi and computers available for community use.[68]

[64] "Borrow a WiFi Hotspot," Oakland Public Library, https://oaklandlibrary.org/borrow-a-wifi-hotspot/.

[65] "Use a Computer at the Library," Oakland Public Library, https://oaklandlibrary.org/computers/.

[66] "Green Computers, Connected Community," Tech Exchange, https://www.techexchange.org/.

[67] "Low-Cost Computer for Qualified Individuals," San Diego Futures Fund, https://sdfutures.org/about-us/.

[68] "Computers," Stockton-San Joaquin County Public Library, https://www.ssjcpl.org/using/computers.html

Asset name	Description
OurCycle LA	Refurbishes computers and distributes them to underserved members of the Los Angeles community, as well as providing affordable internet service options.[69]
San Francisco Human Services Agency (SF Connected Program)	The SF Connected program offers no-cost digital skills and literacy classes for older adults and adults with disabilities, covering skills including social media use to help older adults avoid social isolation and managing finances online. Classes are offered in English, Spanish, Vietnamese, Russian, and Chinese.[70]
Los Angeles Public Library	Offers computer skills classes and free basic learning tools,[71] as well as Chromebook and internet hotspot bundles for long-term usage.[72]
iFoster	Offers free phones and low-cost computers for youth in foster care in California and provides education and support to sign up for affordability programs, helping to bridge the digital divide for youth within the child welfare system.[73]
Anza Electric Cooperative (AEC)	AEC received a grant from the Broadband Adoption Account in 2023 to offer digital literacy services to residents within its service area (the rural Anza Valley and surrounding areas).[74]
Napa County Public Library	The Library offers a computer lab for public use.[75]
Butte County Library – Access to Technology (ATT) program	ATT offers lessons for older adults and adults with disabilities to increase digital literacy. The program provides device loans and free Wi-Fi connectivity.[76]

[69] "OurCycle LA," City of Los Angeles, https://ita.lacity.gov/news/ourcycle-la.

[70] "SF Connected Program," San Francisco Human Services Agency, https://www.sfhsa.org/services/disability-aging-services/community-activities/sf-connected.

[71] "Computer Skills," Los Angeles Public Library, https://www.lapl.org/collections-resources/web-resources/computer-skills.

[72] "Computer Bundles," Los Angeles Public Library, https://www.lapl.org/tech2go/computer-bundles.

[73] "Bridging the Digital Divide," iFoster, https://www.ifoster.org/bridging-the-digital-divide/.

[74] "CPUC Advances Broadband Access and Equity in State," CPUC news release, April 27, 2023, https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-advances-broadband-access-and-equity-in-state-2023.

[75] "Public Computers," Napa County Library, https://www.countyofnapa.org/678/Public-Computers.

[76] "Access to Technology," Butte County, https://www.buttecounty.net/1650/Access-to-Technology-ATT.

Asset name	Description
Palo Alto City Library	The Library lends Chromebooks and offers workshops centered on digital skills.[77]
Imperial County Office of Education (ICOE) – BorderLink	ICOE is deploying a private wireless network to connect students in the County to high-speed internet outside of schools, and providing students, teachers, and other education workers with devices to access the internet.[78]
SD Access 4 All	A comprehensive internet connectivity program that connects people in San Diego to numerous tech resources. These include laptops and mobile hotspots for checkout at libraries, low-cost computers, free individual tech support, and public Wi-Fi.[79]
Building Skills Partnership	This Los Angeles-based nonprofit, which provides workforce development and other support for property service workers, has digital literacy programs which include access to Chromebooks and other tech devices.[80]

The CPUC's **Broadband Adoption Account**[81] provides grants to increase publicly available or after-school broadband access and digital inclusion, such as digital literacy training programs and public education to communities with limited broadband adoption including low-income communities, senior communities and communities facing socioeconomic barriers to broadband adoption.

In total, $7.2 million has been awarded for 174 digital literacy projects serving 46,472 participants, $1.1 million has been awarded for 28 broadband access projects serving 176,304 participants, and $3.4 million has been awarded for five call center projects serving 19,836. Altogether, total funding of $11.7 million for 207 projects in 30 counties has been provided. Additionally, $5 million was provided to the California Department of Education for the provision of over 13,000 computers and hotspots to students in 12 low-income schools and school districts.

The CPUC's **Rural and Urban Regional Broadband Consortia Account** facilitates the deployment of broadband services by assisting CASF infrastructure grant applicants in the project

[77] "Technology," Palo Alto City Library, https://library.cityofpaloalto.org/technology/.

[78] "BorderLink," ICOE, https://www.icoe.org/about-icoe/borderlink.

[79] "SD Access 4 All," City of San Diego, https://www.sandiego.gov/sdaccess.

[80] "Digital Literacy," Building Skills Partnership, https://www.buildingskills.org/digital-literacy.

[81] "Broadband Adoption Account," CPUC, https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/california-advanced-services-fund/casf-adoption-account.

development or grant application process or assisting broadband deployment projects related to programs created under SB 156 and AB 164. In total, $18.7 million has been awarded (i.e., a total of 47 grants) to support 17 consortia groups formed to serve 54 counties to advance broadband access, deployment, and adoption.

The CPUC's **Broadband Public Housing Account** is aimed at connecting broadband networks that offer free broadband service that meets or exceeds State standards, as determined by the Commission for residents of low-income communities that do not have access to any broadband service provider that offers free broadband service that meets or exceeds State standards. Between 2013 and 2021, $9.27 million has been awarded for infrastructure to support 322 projects connecting 21,268 affordable housing units across 32 counties. In addition, $4.67 million has been awarded for adoption to provide digital literacy training to 128 locations with 29,101 residents. In 2022, the CPUC adopted programmatic changes for publicly supported housing developments as authorized by SB 156 and allocated $15 million for the next fiscal year for this funding program.

The CPUC's **Deaf and Disabled Telecommunications Program** (DDTP) provides specialized telecommunications equipment, speech generating devices, and relay services to qualified Californians. While the program itself provides equipment that can work with both traditional telephone service and IP-based service, the program's California Relay Service is becoming less relevant as IP-based apps and texting are readily available. Additionally, some DDTP participants find affordability of broadband service to be an impediment, because DDTP does not offer a broadband subsidy (although California LifeLine does allow data plans for wireless subscribers). As such, some DDTP participants are unable to upgrade to newer IP-enabled services, such as those offered with cellular smart phones.

3.3.3 Broadband affordability

As of July 2023, a total of 2,252,562 households in the State are enrolled in the FCC's Affordable Connectivity Program (ACP),[82] representing about 40 percent of the 5.6 million households estimated to be eligible.[83] California's enrollments also account for nearly 12 percent of nationwide ACP enrollments.[84]

The goal of the CPUC's Low-Income programs, such as California LifeLine, is to meet California's universal service commitment by assuring the continued affordability and widespread availability of high-quality communications services to all Californians. The CPUC's programs meet this commitment in several ways including prioritizing affordability through support for meaningful

[82] "ACP Enrollment and Claims Tracker," USAC, https://www.usac.org/about/affordable-connectivity-program/acp-enrollment-and-claims-tracker/#enrollment-by-state (accessed July 6, 2023).

[83] "California Bipartisan Infrastructure Law Fact Sheet," White House Briefing Room, July 2022, https://www.whitehouse.gov/wp-content/uploads/2022/08/California-BIL-Fact-Sheet.pdf.

[84] "ACP Enrollment Tracker," California Broadband for All, https://broadbandforall.cdt.ca.gov/affordable-connectivity-program/acp-enrollment/.

competition and consumer choice, efforts to increase enrollment in existing affordability programs, and development of programs that fund discounts on high-speed broadband and devices through grants or subsidies. As the table below demonstrates, the CPUC's work to support affordability is complementary to many other efforts by ISPs, nonprofits, and community anchor institutions to provide affordable access to high-quality communications.

The California LifeLine Program, for example, provides discounted home phone and wireless phone services to qualified households. Discounts have expanded the wireless marketplace with wireless resellers offering competitive bundling of broadband access with wireless voice services, helping consumers lower the cost of their phone bills while increasing access to services. Details on new pilot programs to expand the effectiveness of LifeLine are in the table below. Other programs such as the CPUC's Public Housing Account, Teleconnect Fund, and Affordability Metrics and Report also serve to ensure affordability considerations are reflected in the CPUC's forward-looking work to expand access to all Californians.

The CPUC is also considering the impact of recent federal programs on California's Low-Income programs and adopting methods to enhance its current programs by leveraging federal resources such as the ACP. Beyond the ACP, including planning for a scenario where ACP may sunset, the CPUC is incorporating affordability benchmarks and discounts on high-speed services through existing and upcoming federal and State grant programs such as the CASF, FFA, and BEAD. The Commission will continue to prioritize affordability as it further develops its BEAD program rules and grant design and as it works with CDT to coordinate related digital equity initiatives.

The Affordability of Utility Service docket has developed a solid foundation for the CPUC to incorporate broad considerations of affordability into its policies and regulations, including this BEAD program design. This proceeding provides the CPUC with tools to address affordability with a long-term perspective and to monitor and adjust its policies as the economic landscape and communications marketplace both change over time.

In addition to CPUC programs, the table below identifies a representative *sampling* of ISPs' discounted service and device programs for low-income subscribers, as well as related broadband affordability assets in the State. The table also identifies examples of programs that are administered through nonprofits and community anchor institutions to enhance enrollment or provide discounted services and devices. These assets are available to most covered populations and historically underrepresented communities. This table is not meant to be exhaustive in scope; the CPUC will continue seeking to identify broadband affordability assets.

The California Department of Technology (CDT) is developing broadband affordability asset inventories as part of its parallel effort to develop the State's Digital Equity Plan.

Table 8: Broadband affordability assets

Asset name	Description
California LifeLine Program	Provides a maximum monthly subsidy of $17.90 to low-income qualified participants for wireline or mobile voice and broadband services.[85] The program works in tandem with the federal Lifeline program, which provides a monthly subsidy of up to $9.25 for telephone and broadband services and is administered by the Federal Communications Commission. Two LifeLine pilot programs launched in June 2023 – one for wireline broadband services and one for wireless broadband services – enable service providers to combine the California LifeLine and federal ACP subsidies.[86] Pilot participants may access up to $57.15 (and up to $127.15 on Tribal lands) of combined federal and state support for standalone broadband service or bundled broadband and voice service plans. The pilots test whether the California LifeLine can leverage federal programs to support new types of services, increase program participation, and offer higher-quality services than would otherwise have been possible.
California Teleconnect Fund	Provides a 50 percent discount on advanced communication services (including Internet access and broadband services) to qualifying K–12 schools, libraries, community colleges, government-owned hospitals/health clinics, and community-based organizations.

[85] Administrative Letter, Notice of Specific Support Amount for 2023 (November 9, 2022), https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/lifeline/notices-for-carriers/admin-letters/ssa/ssaadministrativeletter2023.pdf.

[86] "CPUC Advances Broadband Affordability and Access in California," CPUC, June 8, 2023, https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-advances-broadband-affordability-and-access-in-california-2023.

Asset name	Description
CPUC Rulemaking to Establish a Framework and Processes for Assessing the Affordability of Utility Service (R.18-07-006)[87]	Declares that consumers need affordable utility services, including communications services, to ensure health, safety, and participation in society; examines the impact of service charges for essential services on residential households at various socioeconomic statuses. Adopts minimum standards defining communications "essential service" and a mechanism for updating the standards as consumer needs and technology advances. Develops a framework for monitoring the affordability of communications essential service, including analysis of the CPUC's communications public purpose programs that support affordability and adoption and applying adopted affordability metrics to measure the effectiveness of the programs. CPUC to publish an Annual Affordability Report using data regarding rates and service offerings for voice and broadband reported by communications service providers, Census Bureau data, and socioeconomic data including the CalEnviroScreen vulnerable communities analysis.[88]
Comcast Internet Essentials program	Comcast, an ISP, offers the Internet Essentials plan, priced at $9.95 per month, which is available to qualifying low-income and other households in California.[89] Comcast Internet Essentials delivers speeds up to 50 Mbps and Comcast Internet Essentials Plus delivers up to 100 Mbps for $29.95 per month.[90] Households that subscribe to Internet Essentials can purchase a new Dell laptop or Chromebook for $149.99 plus tax.[91]

[87] Order Instituting Rulemaking, R.18-07-006 (Filed, July 12, 2018), https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M218/K186/218186836.PDF; See also, CPUC Affordability Rulemaking website, https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/affordability.

[88] CalEPA CalEnviroScreen, https://oehha.ca.gov/calenviroscreen.

[89] Comcast, application for Internet Essentials plan, https://apply.internetessentials.com/.

[90] Comcast, "Internet Essentials," https://www.xfinity.com/learn/internet-service/internet-essentials.

[91] Comcast, "Low-Cost Computer," https://internetessentials.com/low-cost-computer.

Asset name	Description
Verizon Forward Program	The Verizon Forward Program provides an additional discount on Verizon Home Internet plans for customers enrolled in the ACP, offering Verizon 5G Home Internet at no cost where available.[92]
City Communications Inc./Tone Communications	Offers ACP-enrolled customers free internet service and a free device through Tone Communications Low-Cost Internet, Free Internet Essentials, and Tone Communications Tablet services.[93]
Cox Communications ConnectAssist and Connect2Compete plans	The ConnectAssist plan offers qualifying low-income customers 100 Mbps service for $30 per month, or no cost with ACP subsidy. The Connect2Compete plan offers qualifying low-income families with at least one K-12 student 100 Mbps service for $9.95 per month, or no cost with ACP subsidy. Other discounted plans are also available to those who may not qualify for ConnectAssist and Connect2Compete.[94]
Mediacom LLC Connect2Compete Plus	Connect2Compete Plus (C2C+) offers 100 Mbps download speeds for $30 per month, or $0 with ACP subsidy and includes a modem, in-home Wi-Fi, unlimited data, and self-installation.[95]
Spectrum/Charter	Spectrum Internet Assist provides low-income households with discounted services and a free modem for approximately $30 a month and, when combined with the ACP program discounts, can provide no cost broadband services.[96]
AT&T Access	AT&T Access offers up to 100 Mbps for $0 with the ACP subsidy.[97]
Frontier Communications	The Frontier Fundamental Internet plan offers 12 Mbps service for $19.99 or $0 with ACP subsidy.[98]

[92] "Free Internet with the Verizon Forward Program and ACP," Verizon, https://www.verizon.com/home/free-verizon-internet/.

[93] "Home," City Communications, Inc., https://citycom.co/.

[94] "Get Low-Cost Internet Options as Low as Free," Cox Communications, https://www.cox.com/residential/internet/low-cost-internet-plans.html.

[95] "Mediacom is proud to participate in the Affordable Connectivity Program (ACP) and help more people connect with high-speed internet," Mediacom Cable, https://mediacomcable.com/acp/.

[96] Spectrum Internet Assist, https://www.spectrum.com/internet/spectrum-internet-assist.

[97] "Access from AT&T," AT&T, https://www.att.com/internet/access/.

[98] "Fundamental Internet," Frontier Communications, https://frontier.com/fundamental-internet.

Asset name	Description
Fresno State Connect	The Fresno State Connect Initiative conducts outreach to rural communities in the San Joaquin Valley about programs that can offer low-cost internet services.[99]
United Ways of California	The United Ways of California provide assistance with finding and enrolling in low-cost internet services and the ACP.[100]
Education SuperHighway – Connect San Francisco	This national nonprofit, based in San Francisco, works to close the digital divide through a series of initiatives focused on bridging the affordability gap for unconnected households—including ACP outreach campaigns in partnership with State and local governments.[101] The organization partnered with the San Francisco Mayor's Office of Housing and Community Development (MOHCD) and over two dozen community organizations to launch a local ACP enrollment initiative ("Connect San Francisco") in May 2023.[102]
Foundation for California Community Colleges – California Connects	Through a partnership with T-Mobile, students, staff, and faculty of the California community colleges can purchase internet service via a 4G LTE mobile hotspot for $19.99 per month with a one-time device cost of $99; a cap of 30 GB of data per month; and no contract.[103, 104]

[99] "Fresno State Connect Initiative," Fresno State, https://academics.fresnostate.edu/oced/initiatives/connectinitiative.html.

[100] "Get Connected to a Low-Cost Internet Program," United Ways of California, https://broadband.unitedwaysca.org/resources.

[101] Education SuperHighway, https://www.educationsuperhighway.org/.

[102] "Mayor's Office of Housing and Community Development Launches Citywide Initiative to Increase Affordable Connectivity Adoption Program," City of San Francisco news release, May 11, 2023, https://sf.gov/news/mayors-office-housing-and-community-development-launches-citywide-initiative-increase.

[103] "California Connects," Foundation for California Community Colleges, https://foundationccc.org/our-work/system-support/providing-affordable-products-and-technology-to-colleges-and-students/california-connects/.

[104] "CalConnects with CollegeBuys.org," https://shop.collegebuys.org/articles/calconnects_landing.htm.

Asset name	Description
Affordable Service Program finder[105]	The California Broadband for All portal includes an affordability portal to help Californians find: • Low-cost internet service • Computer offers • Digital skills training (like computer and internet basics)

3.3.4 Broadband access

The following table identifies examples of public Wi-Fi networks, cellular connectivity (mobile broadband), and open-access middle-mile networks in the State. These assets are available to most covered populations and historically underrepresented communities. Additional broadband access assets are included in Appendix A.

Table 9: Broadband access assets

Asset name	Description
AT&T cellular service (mobile broadband)	AT&T delivers cellular connectivity (mobile broadband) throughout most of California
T-Mobile cellular service (mobile broadband)	AT&T delivers cellular connectivity (mobile broadband) throughout most of California
Verizon Wireless cellular service (mobile broadband)	AT&T delivers cellular connectivity (mobile broadband) throughout most of California
California Middle-Mile Broadband Network	The State is constructing a statewide open access middle-mile network that will support last-mile services, with a focus on areas that are unserved
Free public Wi-Fi San Diego	The SD Access 4 All program offers open public Wi-Fi access at over 300 locations in the City.[106]

[105] "Affordable service programs," California Broadband for All, https://broadbandforall.cdt.ca.gov/affordable-service-programs/.

[106] "Open Public Wi-Fi in San Diego," SD Access 4 All, https://www.sandiego.gov/sdaccess.

Asset name	Description
Angeleno Connectivity Trust	The Angeleno Connectivity Trust is offering up to 18,000 free Wi-Fi hotspots to K-12 students "experiencing homelessness, in foster care, at-risk youth, students with a disability and those who may have dropped out of school or [are] at risk of dropping out due to lack of connectivity."[107]
Sacramento Park Wi-Fi	The City of Sacramento provides free Wi-Fi internet access at 27 parks throughout the City from sunrise to sunset.[108]
San José free public Wi-Fi	The City is offering 24/7 high-speed public Wi-Fi service for downtown areas, all City libraries, select community centers, and some Near East Side Union High School District attendance areas.[109]
Nevada County free Wi-Fi	The County offers free Wi-Fi access at public libraries, the County government center, courthouses, and other locations.[110]
San Mateo County Wi-Fi Program	The County's public Wi-Fi program offers internet access at "park & connect," indoor, and outdoor locations.[111]
LA County Library Wi-Fi	Unlimited free Wi-Fi access is offered at all library locations and parking lots.[112]
City of Gonzales – Internet for All	The City partnered with T-Mobile to give away free 4G LTE Wi-Fi hotspots to residents as a part of the Internet for All initiative. Hotspots would offer unlimited high-speed internet access for up to 12 connections at once.[113]

[107] "Angeleno Connectivity Trust WiFi Hotspot For K-12 Students," Los Angeles, https://getconnectedlosangeles.lacity.org/.

[108] "City Of Sacramento Park Wi-Fi," City of Sacramento, https://www.cityofsacramento.org/WiFi.

[109] "Free Public Wi-Fi Access," City of San José, https://www.sanjoseca.gov/residents/digital-inclusion/borrow-tech-devices-free-public-wi-fi

[110] "Free Wi-Fi Locations," Nevada County, https://nevadacountyca.gov/1500/Free-Wi-Fi-Locations.

[111] "San Mateo County Digital Equity Portal," San Mateo County, https://www.smcgov.org/smc-digital-equity-portal.

[112] "Unlimited Access," LA County Library, https://lacountylibrary.org/wifi/.

[113] "Internet For All," City of Gonzales, https://gonzalesca.gov/residents/internet-all.

Asset name	Description
City of Stockton digital equity program	The City utilized ARPA funds to purchase and distribute 1,550 Chromebooks, hotspots, and 500 tablets. Three years of prepaid internet service were included with devices.[114]
City of Los Angeles free Wi-Fi	The City is offering free public Wi-Fi access in six City parks and downtown LA.[115]
OAK Wi-Fi	The City of Oakland provides free internet in areas of East and West Oakland, Uptown, and Downtown.[116]
Los Angeles Unified School District (LAUSD) – All Families Connected	LAUSD launched a program called "All Families Connected" to ensure students have reliable broadband access at school and home. Parents/guardians complete a survey of their device and connectivity needs, and LAUSD works with service providers to arrange a solution for home internet service at no cost to the family.[117]
City of Watsonville public library Wi-Fi	The City's public library offers free internet access for cardholders above the age of 18 through mobile hotspots. Mobile hotspots can be borrowed for three weeks.[118]
Los Angeles Public Library – Tech2go	Through the Tech2go program, individuals without broadband access can check out mobile hotspots from the Los Angeles Public Library.[119]

[114] "Digital Equity Project," City of Stockton, https://www.stocktonca.gov/government/departments/communityServices/digitalequityproject.html.

[115] "Free Wi-Fi Access In Los Angeles," Discover Los Angeles, https://www.discoverlosangeles.com/things-to-do/free-wi-fi-access-in-los-angeles.

[116] City of Oakland, https://www.oaklandca.gov/topics/oakwifi.

[117] "LAUSD is providing free in-home internet access to families in need," LAUSD Unified, https://www.lausd.org/site/default.aspx?PageType=3&ModuleInstanceID=64777&ViewID=7b97f7ed-8e5e-4120-848f-a8b4987d588f&RenderLoc=0&FlexDataID=118508&PageID=16569.

[118] "WiFi Hotspots," City of Watsonville Public Library, https://www.cityofwatsonville.org/2139/WiFi-Hotspots.

[119] Tech2go, Los Angeles Public Library, https://www.lapl.org/tech2go/mobile-hotspots.

Asset name	Description
Cruzio Internet, Community Foundation Santa Cruz County – Equal Access Santa Cruz County	A partnership between Cruzio Internet and the Community Foundation of Santa Cruz County with the stated goal of delivering broadband access to "every family in the Santa Cruz community, regardless of income level."[120] The ISP currently has several deployment projects underway in the County.[121]

3.3.5 Digital equity

The following table identifies representative digital equity assets in the State of California, including workforce development training and employment services related to broadband adoption; technical assistance programs aimed at supporting digital inclusion; and partnerships and coalitions that work toward digital equity. These assets are available to all covered populations and underrepresented communities. Additional assets are included in Appendix A.

The California Department of Technology (CDT) is also developing digital equity asset inventories as part of its parallel effort to develop the State's Digital Equity Plan.

Table 10: Digital equity assets

Asset name	Description
Digital Nest	Technology learning center for youth that provides mentoring, classes, and opportunities for digital skill development. Locations in Watsonville, Salinas, and Gilroy; Modesto and Stockton to come.[122]
California State Library Career Pathways	A variety of workforce development training platforms for all Californians through their public libraries and available to jobseekers and learners of all levels
California Community Foundation (CCF)	CCF's Digital Equity Initiative, centered around community education and empowerment, strives to build awareness about digital access inequity within Los Angeles County's historically marginalized minority communities as a springboard for future active action.[123]

[120] "Equal Access Santa Cruz County," Equal Access Santa Cruz, https://equalaccesssantacruz.com/.

[121] "Current Projects," Equal Access Santa Cruz, https://equalaccesssantacruz.com/current-projects/.

[122] "Impact," Digital Nest, https://digitalnest.org/digital-nest-impact/.

[123] "Digital Equity Initiative," California Community Foundation, https://www.calfund.org/digital-equity-initiative/.

Asset name	Description
California Alliance for Digital Equity (CADE)	CADE is a statewide group of advocates that push for public policy to enhance the state of digital equity in California through means such as device acquisition, improved digital literacy, and broadband access.[124]
LA Digital Equity Action League (LA DEAL)	The LA DEAL consortium aims to "address broadband access in a systemic and equitable way through true community representation and a strong infrastructure of civic leaders representing business, education, nonprofits, and government, so that both unserved and underserved communities have equal access to affordable, reliable, and high-speed internet service, and the devices and training to optimize their use."[125]
Santa Clara County Office of Education (SCCOE)	Beginning in April 2020, SCCOE launched an initiative to bridge the digital divide amongst students and their families that raised $14.5 million in funding to provide 20,800 computing devices; 14,200 hotspots; and internet service to 16,000 students. Support was provided by funding and in-kind contributions by local governments, ISPs, businesses, community organizations, and philanthropic organizations.[126]
Dev/Mission	Youth technology training program that connects under-resourced young adults with career opportunities in the tech industry. The Community Technology Associate (CTA) program provides affordable housing communities in San Francisco with free tech support and digital literacy training provided by CTA interns, who visit locations in partnered neighborhoods to teach individuals one-on-one.[127]

[124] "About Us," California Alliance for Digital Equity, https://cade.nextgenpolicy.org/home/#about.

[125] "About Us," LA DEAL, https://ladeal.org/misson/.

[126] "Digital Equity-Bridging the Digital Divide," Santa Clara County Office of Education, https://www.sccoe.org/covid-19/digital-divide/Pages/digital-equity.aspx.

[127] "Community Technology Associate," Dev/Mission, https://devmission.org/cta/.

Asset name	Description
San José Digital Inclusion Partnership	$18 million cross-sector fund that will support grants with the goal of closing the City's digital divide over the next 10 years. The program aims to provide 50,000 San José households with universal device access and connectivity, as well as resources to advance digital literacy skills. The City engaged CETF to administer grant-making.[128]
#OaklandUndivided	An equity-based, collective impact initiative launched in May 2020 to address the digital divide in areas of Oakland through partnerships with the City of Oakland, school district, public housing, and community stakeholders. The program provides technical support, digital literacy training, discounted device distribution, and support to enroll in ACP.[129]
ClosingTheDivide	Nonprofit organization based in the Bay Area focused on bringing technological tools to under-resourced communities, including building computer labs and donating devices. The organization strives to combat the environmental effects of device production by reducing E-waste and offering device repair classes, and also offers various workshops to promote and expand digital literacy.[130]
Sourcewise – Connections, Health, Aging, & Technology (CHAT) Program	Offered in partnership with the California Department of Aging, the CHAT program aims to reduce social isolation of older adults who live alone by providing access to a loaner iPad and tailored training through one-on-one support or virtual learning sessions.[131]
Capital Region Coalition for Digital Inclusion	When Sacramento Public Library hosted the Sacramento Digital Inclusion Summit in January 2019, the Coalition was formed. Partnering with a variety of businesses/organizations, it works to increase digital access through affordable devices and access, as well as digital literacy training. In addition, its website provides a portal with an accessible and comprehensive list of resources for digital inclusion.[132]

[128] "About," San José Digital Inclusion Fund, https://www.sjdigitalinclusion.org/about.

[129] #OaklandUndivided, https://www.oaklandundivided.org/.

[130] ClosingTheDivide, https://www.closingthedivide.foundation/.

[131] "Digital Inclusion; Connections, Health, Aging, and Technology Program," Sourcewise, https://mysourcewise.com/programs-services/digital-inclusion/.

[132] "Our Story," Capital Region Coalition for Digital Inclusion, https://digitalinclusionsac.org/our-story/.

Asset name	Description
California State Library and Southern California Library Cooperative (SCLC) – Connected California	Connects Californians with Digital Navigators who can help in many areas of tech access and affordability, such as locating low-cost internet and devices, signing up for digital skills classes, and more. Services are free and available in English and Spanish.[133, 134]

3.4 Needs and gaps assessment

This section describes the gaps between the current state of broadband and digital inclusion and the needs of residents and community anchor institutions in California, as documented through rigorous and comprehensive data collection and stakeholder outreach efforts.

The needs and gap assessment will be further described in the State's Digital Equity Plan, which is in progress in a parallel effort led by the California Department of Technology (CDT).

This section addresses item 8 in the Five-Year Action Plan requirements: Broadband availability and adoption data. This section also addresses item 9 in the Five-Year Action Plan requirements: Broadband service needs and gaps.

The needs assessment documented in this Plan reflects the CPUC's evaluation of the range of data sources identified by NTIA as well as data and insights gathered through the comprehensive stakeholder engagement process described in Section 5. The CPUC and CDT will also continue their stakeholder engagement efforts on an ongoing basis to assess relative needs after submittal of this Plan.

3.4.1 Broadband deployment

The CPUC and the State Legislature have identified a lack of sufficient access to affordable, nondiscriminatory middle-mile network services as a gap in broadband deployment in California. SB 156 allocated $3.25 billion in funding for the State to construct the Middle-Mile Broadband Network (MMBN), an open access statewide middle-mile network that will support last-mile deployment, with a focus on unserved areas of the State. This investment is fundamentally designed to deliver open access middle-mile fiber within proximity to the State's unserved locations—thus minimizing the cost of last-mile service to connect those addresses.

SB 156 defines an open access network as one that provides "equal non-discriminatory access to eligible entities on a technology and competitively neutral basis, regardless of whether the entity is

[133] "Welcome to Connected California," Connected California, https://connectedca.org/

[134] "Connected California Program Launches to Bridge the Digital Divide," SCLC news release, PR Newswire, December 8, 2022, https://www.prnewswire.com/news-releases/connected-california-program-launches-to-bridge-the-digital-divide-301698916.html.

privately or publicly owned."[135] Benefits of an open access model can include reduced transport costs, increased reliability, greater access to interconnection points, and opportunities for innovative business strategies[136] for last-mile providers, anchor institutions, and Tribal entities in the State.

In a November 2021 letter to CDT evaluating initial MMBN project locations, the CPUC President at the time, Marybel Batjer, noted that "the lack of available middle-mile broadband infrastructure has been a major barrier in connecting California's unserved and underserved communities."[137]

Per the establishing statute, the CPUC was directed to identify locations for the network that "will enable last-mile service connections and are in communities where there is no known middle-mile infrastructure that is open access, with sufficient capacity, and at affordable rates." The Commission was also directed to identify priority locations that can be "built expeditiously," or have "no known middle-mile network access," are "underserved by middle-mile networks," or lack "sufficient capacity to meet future middle-mile needs."

Using the statutory criteria, the CPUC conducted an extensive analysis of the gaps in middle-mile access across the State and gathered detailed public comment, mapping data, financial analysis, and affordability data to recommend a comprehensive set of recommended routes and locations for open-access middle-mile deployment. Of these, the CPUC prioritized locations that enable last-mile connections to unserved residences[138]—and also prioritized entities without "sufficient high-bandwidth connections" that include certain community anchor institutions and Tribal lands.[139]

To support transparency and engagement of local and State stakeholders, the CPUC has crafted an information and resource portal within the State's MMBI portal that contains the CPUC's analyses, public comment, and data used to identify the locations.[140] This information continues to serve as the groundwork for efforts by multiple State agencies to support the MMBI process.

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[135] SB 156 (2021), Section 3, (Govt. Code Sec. 11549.50(e)); See, https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220SB156.

[136] "Broadband Factors for Last-Mile Connectivity," prepared by CTC Technology and Energy for the CPUC, December 2021, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/broadband-implementation-for-california/caseworkers/ctc-report-to-cpuc---middle-mile-broadband-factors-for-last-mile-connectivity---20211228.pdf.

[137] Marybel Batjer, President, CPUC, to Amy Tong, Director and State Chief Information Officer, California Department of Technology; November 16, 2021; https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/broadband-implementation-for-california/broadband-middle-mile-initiative---phase-1---cpuc-transmittal-letter-11-16-21.pdf.

[138] Defined by SB 156 as those that lack service of 25 Mbps downstream, 3 Mbps upstream.

[139] SB 156 (2021), Section 3, (Govt. Code Sec. 11549.54(a-d); See, https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220SB156.

[140] Broadband for All, Middle-Mile Broadband Initiative, CPUC Data & Analysis, https://middle-mile-broadband-initiative.cdt.ca.gov/pages/data-and-analysis.

As the State contemplates the last-mile broadband buildout in this Plan, another key need is the broadband deployment workforce. The available data appear to indicate that California has at best an average level of workers with relevant skills.

A March 2023 report from the Public Policy Institute of California discusses labor shortages as one potential obstacle and cause for delays of broadband deployment projects in the State; it cites an Association of General Contractors' survey that finds 91 percent of construction firms have a hard time finding workers.[141] Labor shortages for broadband deployment projects are particularly pronounced on Tribal lands as Tribal governments in California compete for qualified workers with other projects being planned in the State.[142]

Data from sources such as the Bureau of Labor Statistics show that California has an average number of telecommunications deployment professionals given the size of California's population.

For example, according to the Bureau of Labor Statistics, California employs the second largest quantity of telecommunications installers and repairers in the U.S. (after Texas), with 12,700. However, the location quotient of telecommunications installers and repairers in California is 0.99, meaning that the ratio of the area concentration of occupational employment to the national average concentration is 99 percent, or almost exactly average.[143]

While imperfect, these data suggest that California will need to train additional telecommunications workers as this Plan increases the pace of last-mile broadband deployment.

3.4.2 Broadband adoption

According to the most recent NTIA data (November 2021), 76.4 percent of California residents use internet at home[144] and 81.2 percent of residents use internet at any location.[145]

The California Department of Technology (CDT) is developing broadband adoption data and insights as part of its parallel effort to develop the State's Digital Equity Plan.

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[141] "Achieving Universal Broadband in California," Public Policy Institute of California (March 2023), page 21, https://www.ppic.org/publication/achieving-universal-broadband-in-california/.

[142] "After federal investment, supply chain jams and labor shortages still hinder tribal broadband access," Marketplace (April 6, 2023) Comments by Southern California Tribal Chairmen's Association broadband advisor. https://www.marketplace.org/2023/04/06/tribal-broadband-access-supply-chain-jams-labor-shortages/.

[143] "Occupational Employment and Wages, May 2022: 49-9052 Telecommunications Line Installers and Repairers," U.S. Bureau of Labor Statistics, last modified April 25, 2023, https://www.bls.gov/oes/current/oes499052.htm.

[144] "Digital Nation Data Explorer: Internet Use at Home," NTIA, November 2021 data, https://ntia.gov/other-publication/2022/digital-nation-data-explorer.

[145] "Digital Nation Data Explorer: Internet Use (Any Location)," NTIA, November 2021 data, https://ntia.gov/other-publication/2022/digital-nation-data-explorer.

3.4.3 Broadband affordability

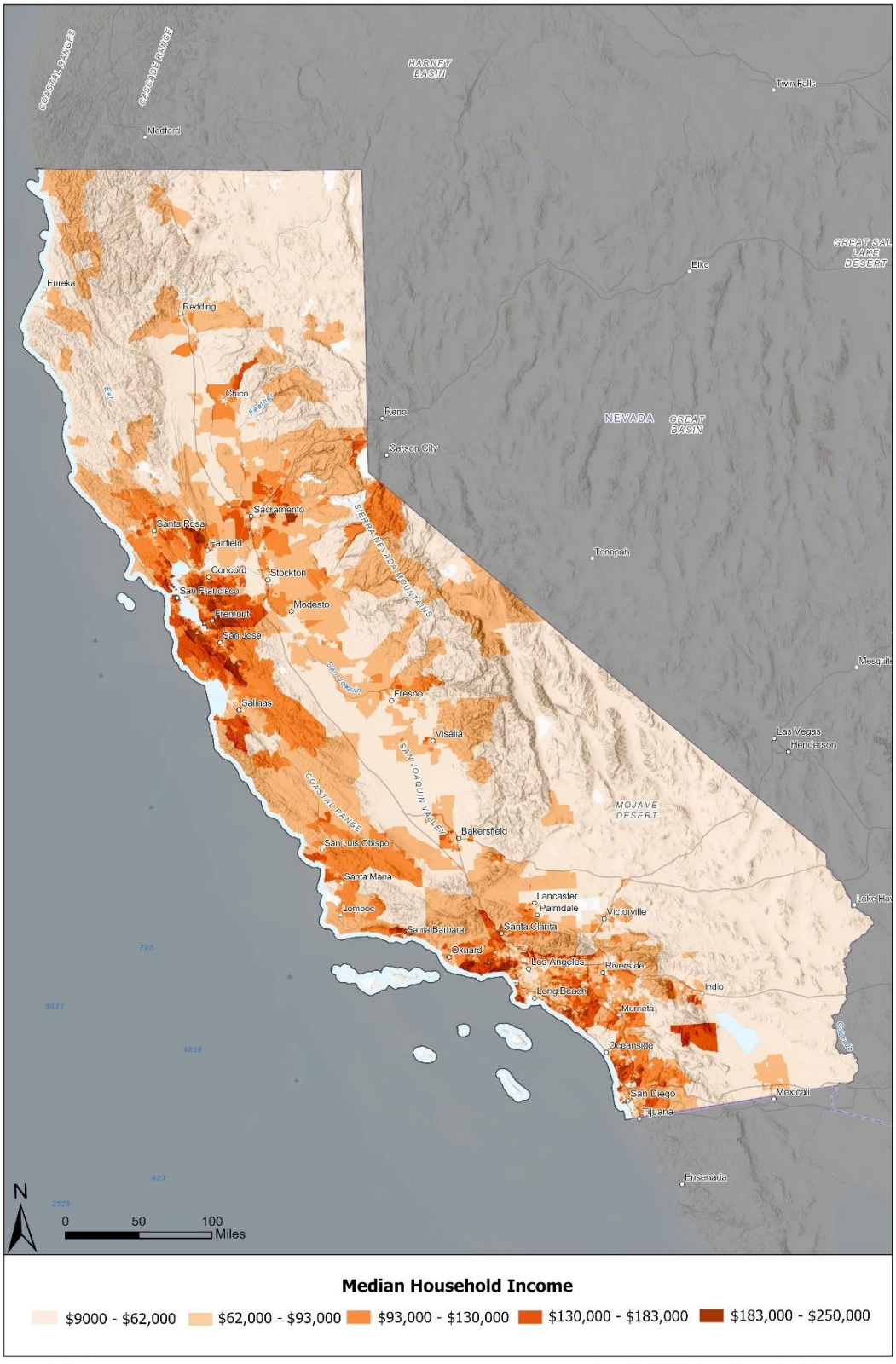
Affordability is a barrier to broadband adoption for some California residents. The map below illustrates median household income across the State, which highlights areas where the barrier of broadband affordability may be most pronounced.

The CPUC's ongoing effort to collect data and identify solutions in this regard are represented by the numerous programs discussed above (see Section 3.3.3.), including the CPUC Rulemaking to Establish a Framework and Processes for Assessing the Affordability of Utility Service (R.18-07-006).

The Affordability rulemaking declares that consumers need affordable utility services, including communications services, to ensure health, safety, and participation in society; examines the impact of service charges for essential services on residential households at various socioeconomic statuses. It adopts minimum standards defining communications "essential service" and a mechanism for updating the standards as consumer needs and technology advances. It also develops a framework for monitoring the affordability of communications essential service, including analysis of the CPUC's communications public purpose programs that support affordability and adoption and applying adopted affordability metrics to measure the effectiveness of the programs.

Analysis conducted for this Plan found that discounted broadband services and subsidy programs are available to many California residents but there is low awareness of and participation in these programs.

Figure 2: Median household income across the State



Basemap: ESRI Terrain
Coordinate System: NAD1983 State Plane California

Created By: CTC Technology and Energy, 20230712
Data Sources: ESRI Atlas, CA Department of GIS, U.S. Census Bureau

About 40 percent of eligible households in the State are enrolled in the FCC's Affordable Connectivity Program (ACP)[146]—meaning that many more households could benefit from the program.

Table 11: Overview of California household enrollment in ACP

Metric	State of California
Total enrollment (households)	2,252,562
Estimated eligible households	5,600,000
Portion of eligible households enrolled	40%

Initial feedback the CPUC received in the Regional-Local Workshops suggests a need for greater outreach through trusted platforms and messengers (including ethnic media, community-based organizations, local leaders, and community health workers or promotoras[147] to reach eligible households using accessible language and strategies. Regional-Local Workshop input also suggests there may be additional barriers to participation in broadband discount and subsidy programs, including eligibility rules, challenges with the enrollment process, and negativity or stigma attached to receiving free services or government services.

Feedback received in Tribal consultations also indicated a lack of affordable internet services on Tribal lands. Recommendations included efforts to build more trust and awareness of the ACP and other subsidies, as well as a recommendation to expand the Enhanced Tribal Benefit to Tribal members not living on Tribal lands. Tribal representatives expressed the need to expand broadband in Tribal communities to ensure access to emergency services, education, economic opportunities, and telemedicine among other areas. Tribal representatives also raised concerns regarding right of ways and permitting of infrastructure on Tribal lands.

The CPUC will continue to gather data and conduct outreach to critical stakeholders that live in and serve disadvantaged communities, communities of color, Tribal areas, and low-income communities. As the CPUC further refines its BEAD program rules and grant design it will rely on this ongoing outreach, the information gathered from its current programs, and public comments to ensure a holistic and multi-faceted approach to prioritizing and addressing affordability.

[146] Enrollment data from "ACP Enrollment and Claims Tracker," USAC, https://www.usac.org/about/affordable-connectivity-program/acp-enrollment-and-claims-tracker/#enrollment-by-state (accessed July 6, 2023); eligibility estimate per "California Bipartisan Infrastructure Law Fact Sheet," White House Briefing Room, July 2022, https://www.whitehouse.gov/wp-content/uploads/2022/08/California-BIL-Fact-Sheet.pdf.

[147] "Promotores de Salud/Community Health Workers," Centers for Disease Control and Prevention, https://www.cdc.gov/minorityhealth/promotores/index.html .

The California Department of Technology (CDT) is also developing broadband affordability data and insights as part of its parallel effort to develop the State's Digital Equity Plan; the CDT's effort is anticipated to include details on Tribal participation in ACP.

3.4.4 Broadband access

Broadband access is available throughout most of the State (see Section 3.3.1), including through wired infrastructure, public Wi-Fi, and cellular connectivity, but too many Californians continue to lack access to reliable, affordable broadband service at served speeds. The CPUC has identified multiple estimates related to the number of locations lacking access to broadband:

- The BEAD program figures released by NTIA in June identified 306,910 unserved locations in California based on NTIA's analysis of data provided to the Federal Communications Commission (FCC) for purposes of determining BEAD allocations. The CPUC analyzed the same FCC data utilized by NTIA to develop an estimate of underserved locations, finding an additional 151,107 locations using the BEAD program parameters for underserved locations.[148]

- In the context of implementing the FFA program, CostQuest estimated the number of unserved addresses and the investment required to bring broadband to areas in California lacking service. This analysis applied program eligibility requirements adopted in CPUC Decision 22-04-055 and relied on the analysis and validation performed by the CPUC for that program, including service availability data as of April 2023. Under this analysis, CostQuest determined there were 996,302 unserved locations lacking access to broadband speeds of at least 25 Megabits per second (Mbps) downstream and 3 Mbps upstream (25/3) through a reliable wireline connection, defined as fiber-to-the-premises or using DOCSIS 3.0 or greater technology.[149] All of these locations are classified as "unserved" in the context of FFA.

- The CASF program is required by statute to define "unserved area" as an area for which there is no facility-based broadband provider offering at least one tier of broadband service at speeds of at least 25/3, and a latency that is sufficiently low to allow real-time interactive applications, considering updated federal and state broadband mapping data. The statute further directs the CPUC to prioritize projects in unserved areas where internet connectivity is available only at speeds at or below 10 Mbps downstream and 1 Mbps upstream (10/1) or areas with no internet connectivity. Pursuant to this statutory direction, the CPUC analyzed

[148] This estimate reflects FCC data on mass-market locations as of August 2023.

[149] "California Broadband Investment Model – Last Mile Funding Analysis: Process Overview and Methods," CostQuest Associates, April 2023, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/broadband-implementation-for-california/ffa-webpages/ca-broadband-investment-model_04212023.pdf. CostQuest notes that it also excluded locations from the unserved total where infrastructure projects are funded by CASF and where projects are presumed to be funded by the federal Rural Digital Opportunities Fund.

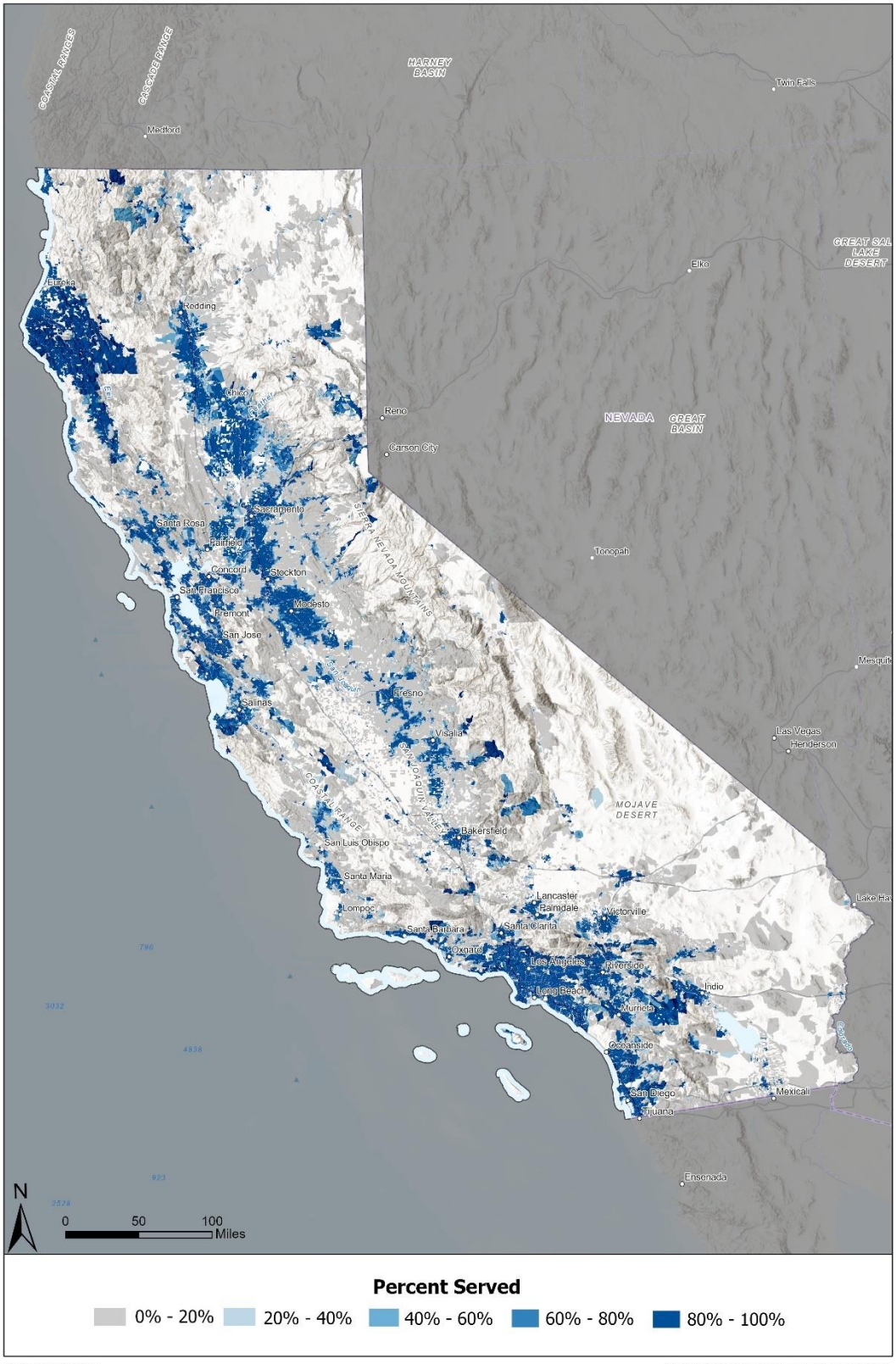
and validated FCC deployment data as of December 2022, finding 261,429 locations meet the statutory definition for "Priority unserved," with an additional 119,950 qualifying as unserved.

The identification of each unserved and underserved location in California will be further refined and clarified in the CPUC's release of its draft Initial Proposal and the State's Challenge Process. Notably, FCC data utilized for calculating unserved and underserved locations as defined by BEAD do not incorporate the CPUC's established process for validation of provider data based on confidential subscription data, which is utilized for the CPUC's FFA and CASF programs; additional validation of provider data or challenges sustained through the forthcoming BEAD Challenge Process may result in higher estimates of unserved or underserved locations due to what may be initial provider overstatement of availability.

NTIA and FCC data also reflect a narrower definition of unserved locations that does not classify certain legacy technologies as unserved or underserved by default but primarily considers whether the location meets specific service speed thresholds. The federal data thus show a smaller number of unserved locations.

The following three maps illustrate potential broadband access in the State using the FCC's current Broadband Data Collection (BDC) data. (The percentages indicated also do not reflect State adjustments or the potential impact of previously awarded federal grants, which are illustrated in Figure 6, below.)

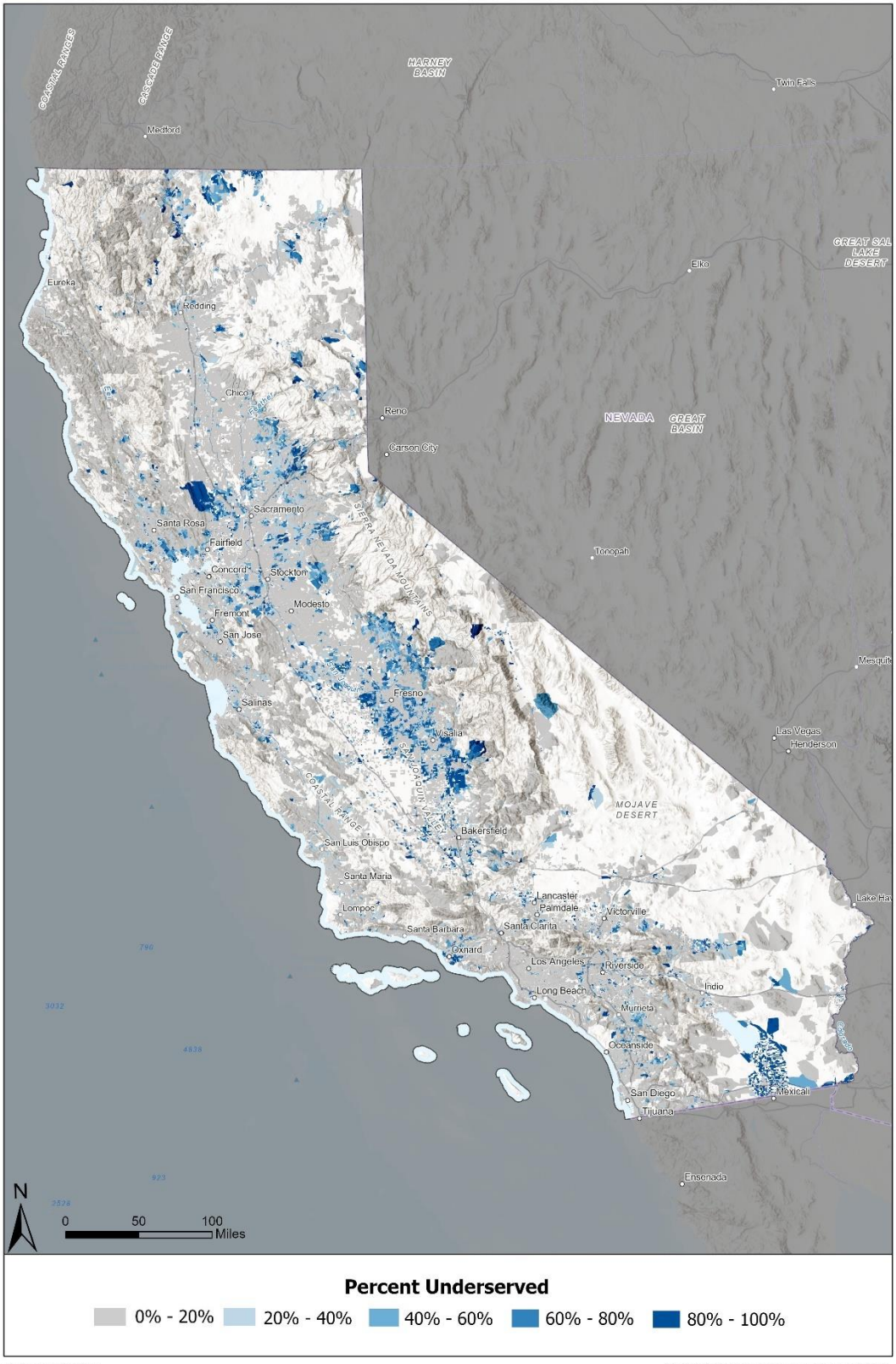
Figure 3: Map of potential served locations



Basemap: ESRI Terrain
Coordinate System: NAD1983 State Plane California

Created By: CTC Technology and Energy, 20230712
Data Sources: ESRI Atlas, CA Department of GIS, FCC

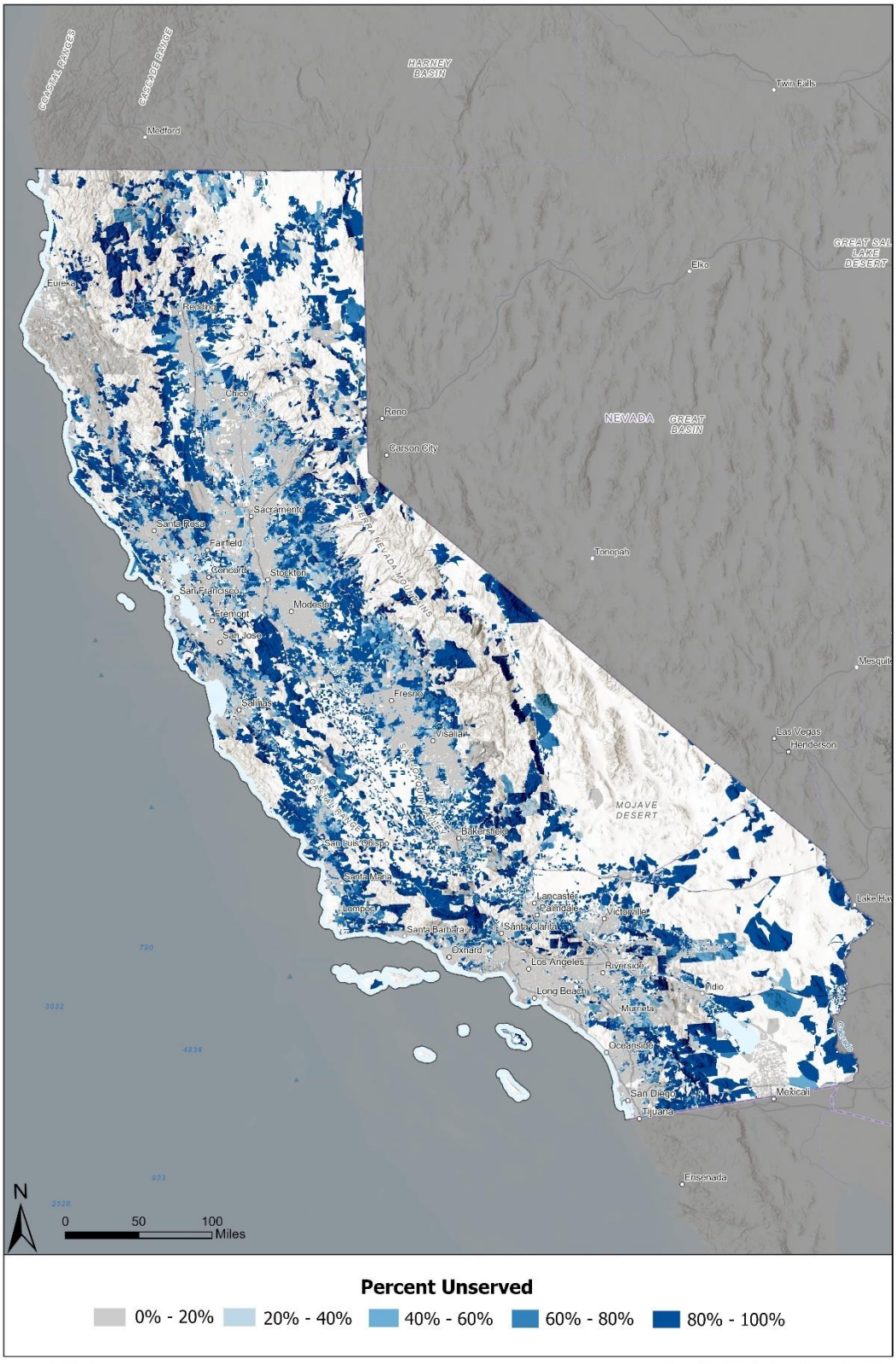
Figure 4: Map of potential underserved locations



Basemap: ESRI Terrain
Coordinate System: NAD1983 State Plane California

Created By: CTC Technology and Energy, 20230712
Data Sources: ESRI Atlas, CA Department of GIS, FCC

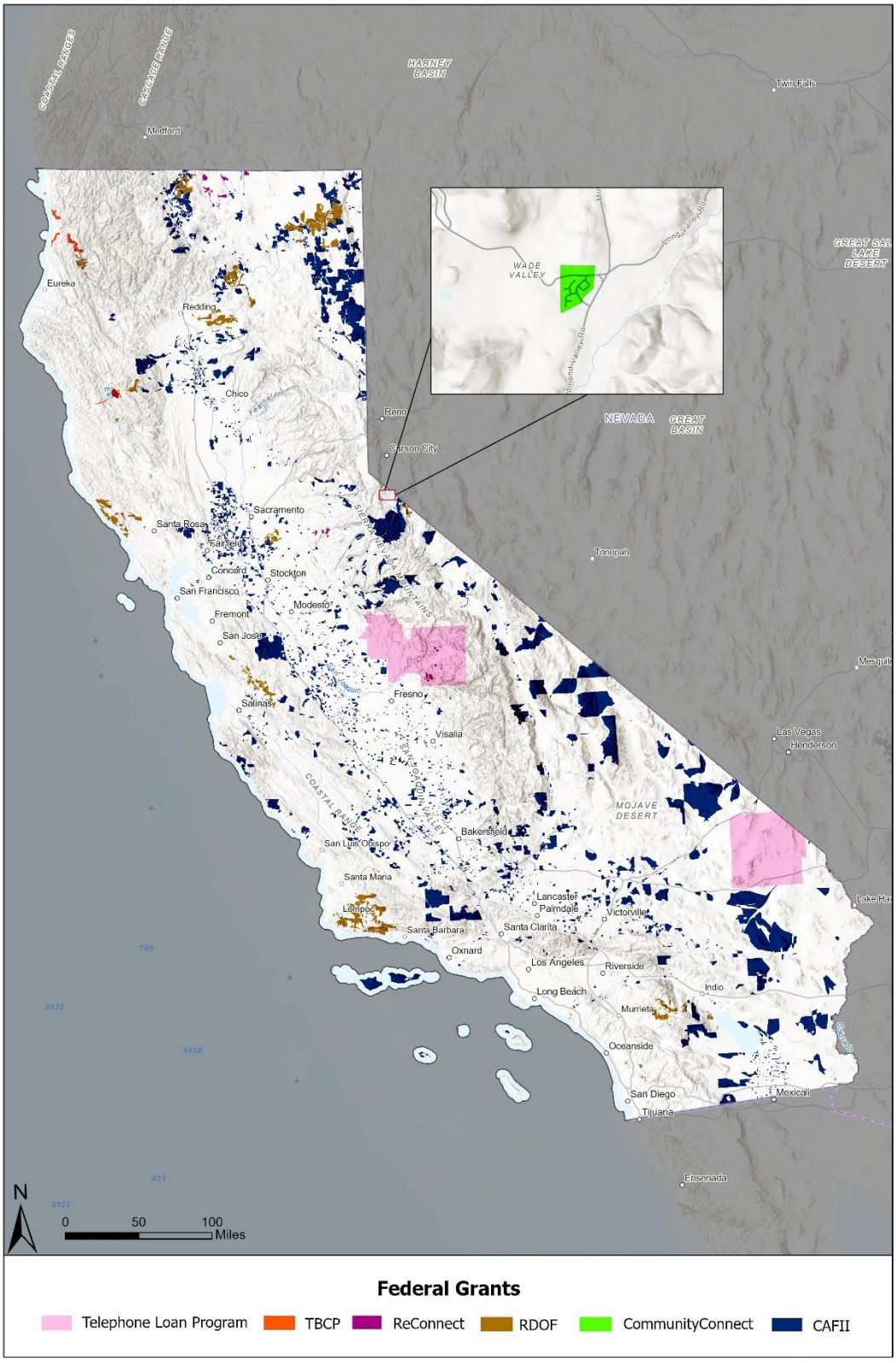
Figure 5: Map of potential unserved locations



Basemap: ESRI Terrain
Coordinate System: NAD1983 State Plane California

Created By: CTC Technology and Energy, 20230712
Data Sources: ESRI Atlas, CA Department of GIS, FCC

Figure 6: Map of areas covered by federal grant awards



Additionally, Regional-Local Workshop feedback indicated a need for increased access for many locations serving covered populations and historically underrepresented communities. Feedback included the need for greater broadband access at affordable housing properties, senior living facilities, health facilities, domestic abuse shelters for women, safe community-based spaces for LGBTQI+ individuals, correctional facilities, access points for the unhoused, locations on tribal lands, and other locations.

Workshop participants and comments on the Plan further emphasized that reliable broadband infrastructure is only one dimension of ensuring all Californians have access to broadband, given ongoing obstacles related to affordability of service and the need for greater digital literacy support in many communities.

3.4.5 Digital equity

Stakeholder engagement efforts and other data collected by the CPUC and CDT for this Plan and other Broadband for All efforts indicate that California's digital equity needs include access to affordable broadband services and increased enrollment in broadband service subsidy programs, device access, and digital literacy training. Data collection and Regional-Local Workshop feedback also indicate covered populations and historically underrepresented communities have unique digital equity needs, such as the lack of translated materials for individuals with language barriers or the need for affordable assistive technology among individuals with disabilities and aging individuals. Workshop recommendations included establishing commitments to equity in grant programs and prioritizing economically disadvantaged and historically marginalized communities for funding.

The California Department of Technology (CDT) is also developing data and insights as part of its parallel effort to develop the State's Digital Equity Plan. For example, Tribal communities may lack internet access because of a need for middle-mile network connections. According to CENIC, nearly 20 percent of California's federally recognized Tribes connect to existing CENIC and Pacific Wave middle-mile networks, but more Tribal communities will have access to middle-mile networks once MMBN is complete.[150] Tribal broadband gaps are not unique to California: FCC data from 2019 show that over 99 percent of housing units in U.S. urban areas have access to broadband service, but only 65 percent of housing units on rural American Indian and Alaska Native (AI/AN) lands have the same level of access, according to the U.S. Bureau of Indian Affairs (BIA).[151]

[150] "Middle Mile Network Access for California Tribes," CENIC, https://cenic.org/initiatives/broadband-for-california-tribes. MMBI is administered by GOLDENSTATENET, a California LLC. "About," GOLDENSTATENET, https://goldenstatenet.org/about.

[151] "Expanding Broadband Access," BIA, https://www.bia.gov/service/infrastructure/expanding-broadband-access.

The CPUC expects the MMBN project (a middle-mile initiative that is not funded by BEAD) to positively impact Tribal communities. CDT conducted Tribal engagement in February 2023 to explain the MMBN project.[152]

The CPUC is also working to educate Tribal communities and support their broadband initiatives. Comments received as part of the CPUC's open proceeding reinforced the understanding that the digital divide is "particularly acute" for Tribal Nations and that lack of broadband access has been an impediment to Tribal members.[153] The CPUC maintains a Tribal broadband support staff because of a recognized need. The staff includes a dedicated CPUC Tribal Advisor and a California Tribal Liaison as well as ad hoc surge staffing from the CPUC Broadband Caseworker Team.[154]

The California Department of Technology (CDT) is also developing digital equity data and insights as part of its parallel effort to develop the State's Digital Equity Plan.

[152] "MMBI Regional Tribal Engagement Series: (Session 3: Districts 5, 6, 9, & 10)," CDT, February 2, 2023, https://cdt.ca.gov/wp-content/uploads/2023/02/regional-tribal-engagement-series-session-3_2-2-23.pdf. Caltrans maintains a Native American Cultural Studies Branch to facilitate Tribal heritage preservation efforts for transportation project development throughout California. "Native American Cultural Studies," Caltrans, https://dot.ca.gov/programs/environmental-analysis/cultural-studies/native-american-cultural-studies.

[153] Yurok Tribe (p. 5), https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K522/506522560.PDF.

[154] "Broadband Resources for Tribes in California," CPUC, https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/broadband-implementation-for-california/v2-tribal-broadband-resources.

4. Obstacles or barriers

This section describes known or potential obstacles or barriers related to broadband deployment and digital equity—which might impede the successful implementation of California's Broadband for All Action Plan and the State's BEAD program.

This Five-Year Action Plan represents a needs assessment that will guide the State's Initial Proposal. Through the process of developing this Plan (including the CPUC's open rulemaking), the CPUC has identified potential obstacles or barriers that it will seek to mitigate. Successfully working through these potential barriers will be critical to achieving the State's vision of universal broadband service and digital equity as established in the California Broadband for All Action Plan.

In addition to the potential issues described below, the CPUC notes the following concerns about BEAD Plan implementation and, more generally, the equitable deployment of broadband infrastructure in the State:

Targeted funding: The CPUC estimates it has approximately $5 billion in funding available (including NTIA's BEAD allocation, funding from Senate Bill 156, and the California Advanced Services Fund) to support broadband deployment. While significant, this funding will not enable deployment of broadband infrastructure to all unserved locations in the State if not spent prudently, coordinated effectively, and targeted toward communities most in need.

Timeline: Given California's large size, it may be a challenge for some of the CPUC's BEAD-funded subgrantees to deploy broadband infrastructure within the required timeline.

Skilled workforce shortages: According to the Public Policy Institute of California, labor shortages are a potential obstacle and cause for delays of broadband deployment projects in the State. Labor shortages for broadband deployment projects are particularly pronounced on Tribal lands as Tribal governments in California compete for qualified workers with other projects being planned in the State.[155]

Capacity to deploy broadband: Given the scope of infrastructure buildout contemplated by this Plan, the CPUC recognizes that developing sufficient capacity may be a challenge for some communities. Providing support to potential subgrantees, including small ISPs, cooperatives and consortia, localities, and other entities will be an important step to building sufficient capacity. The CPUC's Local Agency Technical Assistance program may help mitigate this challenge by supporting tribes and local agencies in their efforts to expand broadband service to unserved and underserved Californians. Established by the CPUC according to Senate Bill 156, the program has a $50 million

[155] "After federal investment, supply chain jams and labor shortages still hinder tribal broadband access," Marketplace (April 6, 2023). Comments by Southern California Tribal Chairmen's Association broadband advisor. https://www.marketplace.org/2023/04/06/tribal-broadband-access-supply-chain-jams-labor-shortages/.

budget for grants including a $5 million set-aside for tribes. Technical assistance funding is for planning work that will facilitate high-speed broadband infrastructure projects.

Data availability: The data available to assess broadband service availability come with inherent challenges, including the granularity of the data available and the timing of the data collection cycle. As such, broadband availability maps are snapshots in time and can become outdated.

4.1 Legislative and regulatory barriers

The Governor, the State Legislature, the CPUC, and its many partners in State government are committed to Broadband for All. Thus, while legislative and regulatory processes could have an impact on implementation of broadband infrastructure deployment, the CPUC is confident that these issues will not pose a barrier.

To that point, the CPUC recognizes the importance of efforts to streamline State and local permitting in such a way as to protect the State's interests while also ensuring effective and efficient broadband construction permitting.[156] Given the size of the State and the multiple permitting entities form which grantees will need to gain approval, permitting for infrastructure projects will represent a major challenge.

Indeed, the Commission requested comment on this issue in the CPUC's open rulemaking proceeding and public comments from service providers echo this point and urge the CPUC to address this issue directly in its Initial Proposal by adopting strategies that further streamline access to utility poles and State-owned right-of-way.[157]

Feedback received in Regional-Local Workshops also included recommendations to streamline permitting and simplify environmental reviews, particularly in rural areas, while Tribal consultation feedback recommended more discussion on reconciling environmental regulation and cultural preservation with broadband construction.

The CPUC partnered with the California Governor's Office of Business and Economic Development, the California Department of Technology, and the California Emerging Technology Fund to produce the "State of California Local Permitting Playbook" in 2022.[158]

That guide also benefited from the engagement and collaboration of a range of local and regional entities across the State—reinforcing the statewide commitment to streamlining permitting for the benefit of broadband deployment. Those partners included Rural County Representatives of

[156] Lindsay McKenzie, "NTIA chief says states have 'homework assignments' on broadband permits," *State Scoop*, March 16, 2023, https://statescoop.com/alan-davidson-ntia-state-broadband-permits/.

[157] California Broadband and Video Association (pp. 59-61), https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K522/506522558.PDF.

[158] "State of California Local Permitting Playbook," August 2022, https://broadbandforall.cdt.ca.gov/wp-content/uploads/sites/19/2022/09/California-Local-Jurisdiction-Permitting-Playbook-1.pdf.

California (RCRC), California State Association of Counties (CSAC), League of California Cities (Cal Cities), California Forward (CA FWD), and California's regional Metropolitan Planning Organizations (MPO), including Southern California Association of Governments (SCAG) and San Diego Association of Governments (SANDAG).

In addition, to meet objectives of the Broadband For All Action Plan goal of broadband availability, the California State Transportation Agency has implemented a Dig Smart policy to install conduit as part of any appropriate and feasible State-funded transportation project in strategic corridors, as well as improving State encroachment permitting processes and rights-of-way management, as needs or opportunities are identified, to accelerate broadband deployment.[159] Additionally, the State Legislature has directed all State agencies to work in cooperation to expedite delivery and permitting of the MMBN and has developed a streamlined process for procurement and State contracting to support MMBN and the State's related broadband policy goals.[160]

The State Legislature is also looking to address potential obstacles and barriers and create a framework for facilitating broadband infrastructure deployment projects that fits within the State's broader public policy goals. As an example, the Legislature is considering a bill that will allow the lease of real property under the jurisdiction of a state agency or department, with only certain exceptions for transportation, parks, and conservation land, at an amount less than fair market value for last mile and middle mile broadband network projects, as long as the CPUC or CDT makes a written finding that such lease will serve a public benefit.[161]

4.2 Labor shortages

National experts report the pool of skilled workers for broadband deployment is smaller than necessary for the broadband projects that BEAD will fund nationwide.[162] As described elsewhere in this Plan, the State plans to use new and existing relationships to promote workforce development efforts and to use its grant program to encourage service providers to hire and train employees as part of their BEAD-funded projects. Workforce development efforts supported by Digital Equity Act funding might further enhance BEAD projects by providing a larger, more diverse pool of talent, which is also an acknowledged need and priority.

The CPUC has received public feedback that equitable workforce development, fair labor practices and high-quality job opportunities are a significant obstacle to widely deploying broadband networks

[159] "Action Plan progress tracker," California Broadband for All, https://broadbandforall.cdt.ca.gov/progress-tracker/.

[160] California Government Code §§11549.55, 11549.56 (SB 156).

[161] California State Legislature, SB 387 (Dodd, 2023), https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202320240SB387.

[162] See, for example: Will Feuer, "The U.S.'s $42.5 Billion High-Speed Internet Plan Hits a Snag: A Worker Shortage," *Wall Street Journal*, April 23, 2023, https://www.benton.org/headlines/us%E2%80%99s-425-billion-high-speed-internet-plan-hits-snag-worker-shortage.

and support underrepresented communities and that the CPUC should place high priority on grant applications that pledge to dedicated resources from their project to address these issues through quantifiable public interest benefits, including local hiring, apprenticeship programs and prevailing wage commitments.[163]

Labor groups specifically weighed in that long-term wage stagnation in the telecommunications industry has been more pronounced than it has on the economy as a whole, creating barriers to hiring and retaining skilled workers and slowing growth in the labor market for this sector.[164] Comments from labor groups also suggest that, currently, there are limited opportunities for workforce development and training, creating safety issues and services quality issues, as well as lost opportunities for advancement and growth. The identification of these barriers results in recommendations by these groups for the CPUC to prioritize labor considerations in program design including fair and transparent labor practices, workforce development programs and training.[165]

Public comments also acknowledge that the CPUC has had a longstanding commitment to collect data and monitor utilities' diverse contracting and supplier practices and urges the Commission to expand this consideration to other workforce practices as it reviews requests for project funding.[166] Comments also address specific considerations related to labor shortages on Tribal lands, and the goals and objectives for equitable workforce development, training, and local hiring requirements for Tribal members and specifically supported by Tribal governments.[167]

Feedback received in Tribal consultations echoed comments on equitable workforce development and recommended requiring compliance with Tribal Employment Rights Ordinance (TERO) for contracting and workforce engagement and development.

Regional-Local Workshop feedback also included recommendations for dedicated training, recruiting, and barrier-removal efforts for members of covered populations and underrepresented communities, including women and residents from economically disadvantaged communities. Other

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[163] County of Los Angeles (p.3). https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K169/506169960.PDF; Joint Advocates (Electronic Frontier Foundation and Center for Accessible Technology) (pgs. 7, 11, 20). https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K523/506523096.PDF.

[164] Communications Workers of America District 9, Jobs with Justice San Francisco, Labor Network for Sustainability, United Steelworkers District 12, United Steelworkers Local 675, (pg. 3-8, 10-11), https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K522/506522994.PDF.

[165] Communications Workers of America District 9, Jobs with Justice San Francisco, Labor Network for Sustainability, United Steelworkers District 12, United Steelworkers Local 675, (pg. 10-11), https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K522/506522994.PDF (citing specifically to the High Road Training Partnerships initiative administered by the CA Workforce Development Board).

[166] Joint Advocates (Electronic Frontier Foundation and Center for Accessible Technology) (pg. 11) https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K523/506523096.PDF.

[167] Yurok Tribe (pg. 4), https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K522/506522560.PDF.

recommendations included developing partnerships between higher education (community colleges in particular) and industry to expand training and certification offerings for broadband deployment careers, and raising awareness of training, apprenticeship, and job opportunities through community media and local job centers.

A March 2023 report from the Public Policy Institute of California discusses labor shortages as one potential obstacle and cause for delays of broadband deployment projects in the State; it cites an Association of General Contractors' survey that finds 91 percent of construction firms have a hard time finding workers.[168] Labor shortages for broadband deployment projects are particularly pronounced on Tribal lands as Tribal governments in California compete for qualified workers with other projects being planned in the State.[169]

4.3 Supply chain issues and materials availability

The extensive funding allocated to broadband infrastructure deployment by Congress—and the current and planned investments by state and local governments and ISPs nationwide[170]—has caused a spike in demand for labor and materials across the country. This increased demand compounded an already disrupted market still recovering from Covid-19 caused factory closures and other issues in the supply chain.

Supply chain challenges in general reached unprecedented levels during the Covid-19 pandemic and have not disappeared, including port congestion and supply chain bottlenecks. "Given that there are multiple new risk factors on the horizon, it is hard to envision trust in the system being restored to pre-Covid-19 levels any time soon," according to a 2023 S&P Global Intelligence report,[171] citing both geopolitical risks such as Ukraine and Taiwan and transportation risks including labor unrest and unanticipated cargo surges.

According to recent research, there is a nine- to 12-month waiting period[172] on orders of new fiber. The allocation of BEAD funding may exacerbate the situation.

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[168] "Achieving Universal Broadband in California," Public Policy Institute of California (March 2023), page 21, https://www.ppic.org/publication/achieving-universal-broadband-in-california/.

[169] "After federal investment, supply chain jams and labor shortages still hinder tribal broadband access," Marketplace (April 6, 2023) Comments by Southern California Tribal Chairmen's Association broadband advisor. https://www.marketplace.org/2023/04/06/tribal-broadband-access-supply-chain-jams-labor-shortages/.

[170] Diana Goovaerts, "Editor's Corner: Is the fiber hangover real?" *Fierce Telecom*, March 15, 2023, https://www.fiercetelecom.com/broadband/editors-corner-fiber-hangover-real.

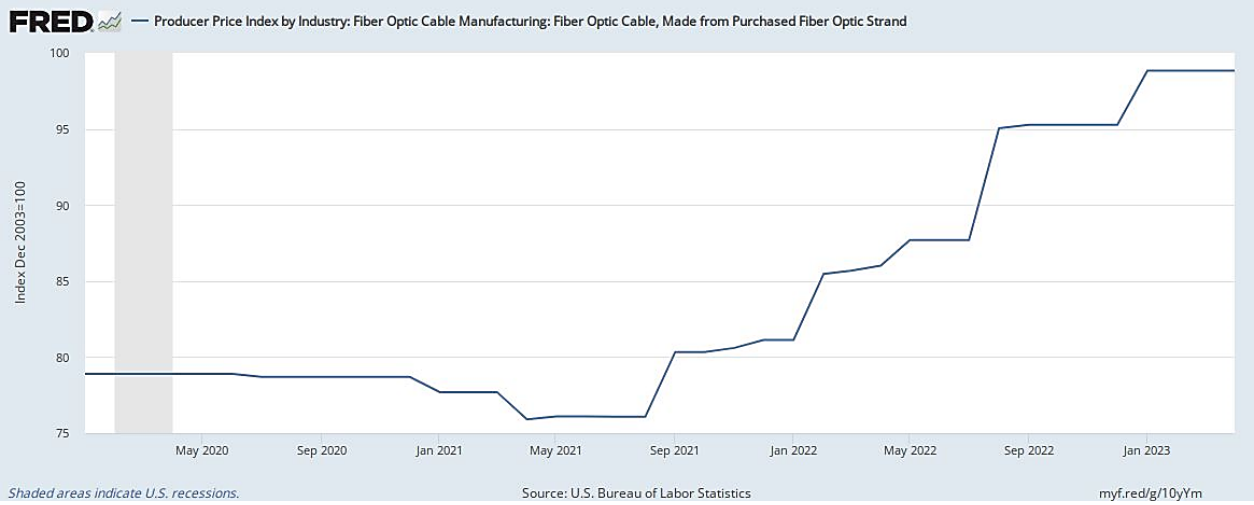
[171] Peter Tirschwell, "Risk Will Define Supply Chains for Years To Come," S&P Global Market Intelligence, January 13, 2023, https://www.spglobal.com/en/research-insights/featured/special-editorial/look-forward/risk-will-define-supply-chains-for-years-to-come.

[172] "Strategies to Mitigate Bottlenecks in the Current Fiber Broadband Supply Chain," Fiber Broadband Association, October 2022, https://www.fiberbroadband.org/d/do/4495.

During 2023, the impact of inflation on materials costs also remains a potential barrier. "Even though inflation started to cool toward the end of 2022, it is still unclear how long it will take to return to its long-run average—that is, if currently high inflation will persist," the Federal Reserve Bank of St. Louis said.[173]

For example, the fiber optic cable producer price index from the Federal Reserve Bank of St. Louis rose more than 20 percent between January 2020 and January 2023, the most recent date for which data are available as of the writing of this Plan, as shown below.[174]

Figure 7: Fiber optic cable producer price index, January 2020 to January 2023



The CPUC will monitor these supply chain and materials challenges—including limited availability and higher prices—and will seek to advise ISPs and other stakeholders that are planning broadband deployment projects on best practices for purchasing and planning procurement, including those identified by the Fiber Broadband Association in its recent white paper, "Strategies to Mitigate Bottlenecks in the Current Fiber Broadband Supply Chain."[175]

[173] Michael McCracken and Trần Khánh Ngân, Federal Reserve Bank of St. Louis, *On the Economy Blog*, "Will High Inflation Persist?" January 10, 2023, https://www.stlouisfed.org/on-the-economy/2023/jan/will-high-inflation-persist.

[174] Federal Reserve Bank of St. Louis, "Producer Price Index by Industry: Fiber Optic Cable Manufacturing: Fiber Optic Cable, Made from Purchased Fiber Optic Strand (PCU3359213359210)" for the period January 2020 to January 2023, https://fred.stlouisfed.org/graph/fredgraph.png?g=10yYm (note that the hyperlink connects to the most recent data and therefore may link to a more recent version of the graph).

[175] "Strategies to Mitigate Bottlenecks in the Current Fiber Broadband Supply Chain," Fiber Broadband Association, October 2022, https://www.fiberbroadband.org/d/do/4495.

4.4 Industry participation

As the CPUC's experience in broadband grant-making illustrates, industry participation—that is, commitments by ISPs to share the cost and risk of last-mile broadband deployment in exchange for partial public funding—will be an important factor in closing the State's digital divide.

As demonstrated by the CPUC's extensive history of grant-making to industry partners, the CPUC is confident that industry participation will be an asset, not a barrier, to the implementation of this plan. For example, the CPUC received dozens of proposals in June 2023 for projects to be funded by the CASF infrastructure Account—demonstrating the potential range of ISPs interested in partnering on broadband deployment across the State.[176]

Further, ISPs have also been a critical part of the public input and dialogue regarding State policy and planning for broadband deployment and they are expected to continue their participation going forward. The CPUC strongly values its work with active and committed ISPs to leverage technical and operational expertise and to support common goals of expanding broadband markets throughout California.

That said, the CPUC also recognizes that the ability of municipal providers and smaller ISPs to build capacity could limit their ability to deploy grant-funded broadband infrastructure within the timeline that will be required by BEAD funding. The CPUC is actively soliciting feedback on this and related topics in its open rulemaking—and will consider this input as it develops its BEAD program.

For example, public comments acknowledge the need and opportunity to support participation by smaller entities and public entities and urge the Commission to prioritize projects that include letters of support from local governments or community organizations and opportunities for public ownership. Comments also urge the Commission to prioritize projects on Tribal lands that have participation by the Tribal government.[177]

Input received at the Tribal consultations included recommendations to support Tribal participation, including facilitating and funding Tribal-to-Tribal technical assistance and peer learning, pre- and post-grant funding technical assistance, supporting the development of Tribal-owned networks, and simplifying applications by aligning State and federal applications.

Feedback from Regional-Local Workshops recommended foster and encouraging women-owned ISPs and to build capacity among racial and ethnic minority-owned companies to pursue infrastructure projects. To support a greater variety of potential applicants, feedback also included

[176] "CASF Infrastructure Project Summaries," CPUC, June 1, 2023, https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/california-advanced-services-fund/casf-infrastructure-project-summaries.

[177] County of Los Angeles (pg. 3-4) https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K169/506169960.PDF. Yurok Tribe (pg. 4) https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K522/506522560.PDF.

recommendations that the CPUC provide more advance notice of funding opportunities (to allow applicants additional time to prepare) and simplify application and reporting requirements.

The CPUC also requested comment on the appropriate scope and criteria for funding sources to satisfy the requirement that BEAD projects include matching funding. Public comments support a set of broad criteria to satisfy the matching funding requirements, including State funding sources to the extent permitted by law and possible exemption criteria for underrepresented communities such as applications from Tribal entities, that will enable smaller entities to meet this requirement more easily.[178] Other public comments urge the Commission to craft its rules to encourage grantees to provide matching with their own funds, leaving other government funding sources for use on separate projects.[179] A Regional-Local Workshop recommendation was to facilitate a loan program for matching funds.

4.5 Topography

California's widely varied topography includes mountains, desert, waterways, and other geographic features that will create challenges for the deployment of broadband infrastructure. The CPUC and its partners across many State agencies are deeply familiar with these issues because they have an impact on the deployment and maintenance of utilities and roads, and the delivery of other critical services.

The CPUC's potential partners in local government are also keenly aware of the barriers created by topography in their regions. For example, the government of Nevada County, California, noted this in its online "frequently asked questions" about broadband access:

> *Question:* "Why do so many residents in Nevada County lack broadband or high-speed internet?"
>
> *Answer:* "Topography: it's more difficult and expensive to build a network in rugged terrain."[180]

The CPUC will consider topography (and its impact on extremely high-cost locations and other challenging locations) as it designs its BEAD program. The CPUC requested comment in its open proceeding on the definition "extremely high-cost locations" for its grant program design. Several comments acknowledged the barrier of topography and other factors that impose high costs to serve

[178] County of Los Angeles (pg. 5-6) https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K169/506169960.PDF. Yurok Tribe (pg. 6) https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K522/506522560.PDF.

[179] California Broadband and Video Association (pp.32-34), https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K522/506522558.PDF; AT&T (p. 6), https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K523/506523427.PDF.

[180] "Broadband in Nevada County: FAQs," Nevada County, California, https://www.nevadacountyca.gov/3496/Frequently-Asked-Questions-FAQs.

a particular area and urged the Commission to develop a definition that addresses high-cost factors such as topography in a flexible way that will allow a mix of technology options to encourage applications even in the hardest to reach areas of the State, while taking care to meet the needs of the communities in high-cost areas with a framework that will support robust, reliable and affordable services.[181]

Regional-Local Workshop feedback also included recommendations to consider a wide range of technology options for hard-to-reach locations, especially in rural areas, while also ensuring the funded infrastructure is of sufficiently high quality.

4.6 Climate

Climate-related issues could have an impact on the deployment of broadband infrastructure in the State; the CPUC's planned mitigation efforts will include ensuring best practices in the engineering, design, and construction of BEAD-funded projects.

According to a 2019 analysis by the Legislative Analyst's Office (LAO),[182] California is prone to natural disasters, with flooding and fires being the most common: 40 percent of State of Emergency declarations issued by the Governor from 1950 to 2017 were related to floods, and 30 percent were related to fires.

Wildfires have become more frequent and severe in recent decades. While the State received less than five federal Fire Management Assistance Grant (FMAG) declarations per decade in the 1970s through the 1990s (issued for a large wildfire at risk of becoming a major disaster), the average has risen to 10 per year since 2000.[183] LAO found that the majority of the State's most destructive and largest fires had occurred within the past two decades.

The Public Policy Institute of California found that 2.7 million Californians live in areas deemed very high risk for wildfire, and millions more are at risk for heavy snow, landslides, ice, flooding, high winds, and earthquakes, putting the communications networks that serve these residents at high risk of failure when the residents need it the most- during a natural disaster.[184]

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[181] Joint Advocates (Electronic Frontier Foundation and Center for Accessible Technology) (p. 2-4) https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K523/506523096.PDF; Fiber Broadband Association (p. 4), https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K523/506523264.PDF; CTIA- The Wireless Association (p.5-6), https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K522/506522555.PDF .

[182] "Main Types of Disasters and Associated Trends," California Legislative Analyst's Office, January 10, 2019, https://lao.ca.gov/Publications/Report/3918.

[183] The LAO report notes that, "Additionally, the Congressional Research Services' report Stafford Act Declarations 1953-2016: Trends, Analyses, and Implications for Congress identifies some changes in federal policies for declaring disasters."

[184] "Achieving Universal Broadband in California," Public Policy Institute of California (March 2023), page 20, https://www.ppic.org/publication/achieving-universal-broadband-in-california/.

The increasing number and intensity of wildfires, as well as Public Safety Power Shutoff events, impact the State's communications networks. The CPUC has been preparing reports and assessments of these impacts and implementing new requirements designed to provide the public with information about communication service outages.

Pursuant to Senate Bill 341 (McGuire, 2021), the CPUC worked with the California Office of Emergency Services to develop requirements for public service outage maps that are maintained by communications service providers on their website. The maps, reports, and assessments are provided to CPUC Commissioners, State lawmakers, local officials and the public to alert them to communications outages and to inform potential statutory and policy changes focused on ensuring that Californians have access to these critical resources during times of wildfire or power shutoffs.

An independent report[185] commissioned by the CPUC on considerations related to technical criteria and network design of the MMBN also noted that plant construction in the State must take into account risks from wildfires. According to the report, installing cables underground can provide protection against heat damage in areas prone to fire: research indicates that cables can withstand temperatures up to 80 degrees Celsius without experiencing significant degradation,[186] and soil at a depth of 60 cm or below is unlikely to experience temperatures above 60 degrees Celsius during a wildfire.[187]

The report also noted that telecommunications infrastructure design and construction in the State should take into account potential risks from seismic activity. While major earthquakes are a less frequent event than fires or floods according to the LAO analysis, making up 7 percent of emergency declarations by the State, the State has experienced multiple destructive earthquakes over the past five decades. Several major fault lines run through the State, putting surrounding areas—including some of the most populated areas in the State such as the Los Angeles area and San Francisco Bay area—at risk for damage.

California also experiences temperature extremes across the state, making weather a factor in deploying broadband infrastructure. For example, areas of the Sierra Nevadas experience months of snowpack, which limits construction crew accessibility and closes deployment windows. While the desert areas, such as Blythe, experience average temperatures of 109 degrees, making working conditions hazardous.

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[185] "Broadband Factors for Last-Mile Connectivity," California Public Utilities Commission, December 2021, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/broadband-implementation-for-california/caseworkers/ctc-report-to-cpuc---middle-mile-broadband-factors-for-last-mile-connectivity---20211228.pdf.

[186] Y. Chen, K. Lewis, Beyond 850 C: Thermal Aging Impact on Optical Fiber with Corning CPC Coatings, June 2017, White Paper 4250, https://www.corning.com.

[187] H.K. Preisler et.al.: Modeling and risk assessment for soil temperatures beneath prescribed forest fires; Environment and Ecological Statistics 7, 239-25, 2000.

Regional-Local Workshop feedback included recommendations to ensure or incentivize building infrastructure underground and designing for redundancy. Tribal consultations echoed the call for design and investment in resilient infrastructure with redundancy in case of climate events and emergency situations.

4.7 Affordability

The affordability of broadband services is recognized as a barrier to broadband adoption for some Californians. In terms of helping individual Californians, the CPUC aggregates and publicizes information about low-cost internet service and subsidies that might be available to low-income households.[188]

The CPUC and the State's Broadband for All initiative are also seeking to mitigate this challenge through a number of statewide efforts. (See Table 3 Section 3.1.8 and Table 8 Section 3.3.3.)

Two California LifeLine pilot programs launched in June 2023—one for wireline broadband services and one for wireless broadband services—are intended to address affordability issues. These pilots enable service providers to combine the California LifeLine subsidy (usually applicable to home phone and cellular service) and federal Affordable Connectivity Program (ACP) subsidies.[189] Pilot participants may access up to $57.15 (and up to $127.15 on Tribal lands) of combined federal and state support for standalone broadband service or bundled broadband and voice service plans. The pilots test whether the California LifeLine can leverage federal programs to support new types of services, increase program participation, and offer higher-quality services than would otherwise have been possible. Additionally, the CPUC states that during these two-year pilot programs it will address the potential for ACP to be replaced by a successor program and the potential to extend these subsidy pilots beyond the conclusion of the ACP.

The CPUC's California Advanced Services Fund (CASF) Public Housing Account[190] is another way in which the CPUC intends to mitigate this obstacle during the implementation of the BEAD program. The Public Housing Account provides grants and loans to build broadband networks offering free broadband service for residents of low-income communities including but not limited to, publicly supported multi-family housing developments, farm-worker housing, and other housing developments or mobile home parks with low-income residents.

[188] "California Low Cost Internet Plans," CPUC, https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/california-low-cost-internet-plans.

[189] "CPUC Advances Broadband Affordability and Access in California," CPUC, June 8, 2023, https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-advances-broadband-affordability-and-access-in-california-2023.

[190] "California Advanced Services Fund (CASF) Public Housing Account," CPUC, https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/california-advanced-services-fund/casf-public-housing-account.

In 2018, the CPUC opened a rulemaking proceeding to adopt methodologies and metrics for assessing affordability of essential utility service, including communications services, to allow the CPUC to consider the relative impact on affordability of the Commission's proceedings, policies, and initiatives.[191]

The CPUC acknowledges that consumers need affordable utility services, including communications services, to ensure health, safety, and participation in society and has used the proceeding to examine the impact of service charges for essential services on residential households at various socioeconomic statuses. The Commission noted that monitoring affordability and the impact of essential service rates on California households may help the Commission close the digital divide.

As part of the proceeding, the CPUC adopted minimum standards defining communications "essential service" (1,000 min of voice, 25/3 Mbps service and 1,024 GB of data capacity)[192] and a mechanism for updating the standards as consumer needs and technology advances. The CPUC also developed a framework for monitoring the affordability of communications essential service, including an ongoing analysis of the CPUC's communications public purpose programs that support affordability and adoption and applying adopted affordability metrics to measure the effectiveness of the programs.

The CPUC also directs its staff to publish an Annual Affordability Report using data regarding rates and service offerings for voice and broadband reported annually by communications service providers,[193] in addition to Census Bureau data and socioeconomic data such as the CalEnviroScreen vulnerable communities analysis.[194] The annual data request for pricing and service offerings allows the CPUC to monitor pricing trends at a granular level as it impacts affordability in different areas throughout the State.

Further, the CPUC requested public comment on strategies and criteria it may consider for grant funding requirements as it designs its Initial Proposal. Many of the comments submitted in response to this inquiry focused on affordability. These comments urged robust requirements for funded projects to go beyond minimum obligations to participate in federal discount programs like the Affordable Connectivity Program, and to require low-cost service plans for the life of the

[191] Order Instituting Rulemaking, R.18-07-006 (Filed, July 12, 2018), https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M218/K186/218186836.PDF; See also, CPUC Affordability Rulemaking website, https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/affordability.

[192] Decision Adopting Metrics and Methodologies for Assessing the Relative Affordability of Utility Service, D.20-07-032 (R.18-07-006) at p. 26.

[193] CPUC Annual Broadband Data Collection Process (pricing and service availability), https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/broadband-mapping-program/broadband-data-submission-guidelines-and-templates.

[194] CalEPA CalEnviroScreen, https://oehha.ca.gov/calenviroscreen.

infrastructure that empowers households with robust and reliable services, flexibility to meet the needs of low-income customers.[195]

The CPUC received comments from small business groups suggesting that access to affordable broadband services is a key element for their work in California to, in turn, promote economic development, workforce development and support businesses owned by underrepresented communities.[196]

Based on these comments, the Commissioner issued a Scoping Memo for the proceeding that further confirmed the CPUC's commitment to addressing affordability issues that go beyond participation in the ACP.[197] The Scoping Memo requested further comment on details of the BEAD grant design for the middle-class affordability plan, low-cost service option, and other factors for consideration to support affordability with BEAD projects. This type of input will help the CPUC consider a variety of options to meet BEAD program requirements for affordability more generally, as well as tailor specific rules where the CPUC has been provided discretion to move beyond minimum standards.

The CPUC also acknowledges that lack of open-access middle-mile and limited competition in unserved areas can lead to affordability challenges. In its open proceeding, the Commission received public comment directly linking the importance of open access policies with ensuring last mile affordability, not only for residential and small business end users, but for local governments, community anchor institutions, and Tribal governments.[198] Other comments counterbalance this thinking with suggestions for narrower open access requirements.[199]

Regional-Local Workshop feedback indicated support for open-access and other shared infrastructure policies to increase competition particularly in rural communities and areas without ISP choice.

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[195] County of Los Angeles (pg. 6-7), https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K169/506169960.PDF; Joint Advocates (Electronic Frontier Foundation and Center for Accessible Technology), (pg. 16-17), https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K523/506523096.PDF.

[196] Small Business Utility Advocates (p 3, 9-10).

[197] Assigned Commissioner's Scoping Memo and Ruling (R.23-02-016), July 14, 2023.

[198] Joint Advocates (Electronic Frontier Foundation and Center for Accessible Technology), (pg. 14-15), https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K523/506523096.PDF; Schools, Health, and Libraries (SHLB) Coalition (pg.2-4, 9), https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K523/506523210.PDF; Next Centuries Cities (pg. 3.5), https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K522/506522661.PDF; The Utility Reform Network (pg. 15-17), https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K523/506523001.PDF.

[199] California Broadband and Video Association, (pg. 2), https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K522/506522558.PDF.

The California Department of Technology (CDT) is researching broadband affordability needs and barriers as part of its parallel effort to develop the State's Digital Equity Plan. Additional discussion of efforts to mitigate broadband affordability issues will be identified by CDT in that Plan.

4.8 Digital literacy

Lack of digital literacy is recognized as a barrier to broadband adoption for some Californians. The CPUC's California Advanced Services Fund (CASF) Adoption Account makes grant funding available to increase publicly available or after-school broadband access and digital inclusion, such as grants for digital literacy training programs and public education to communities with limited broadband adoption.[200] The Commission is required to give preference to programs and projects in communities with demonstrated low broadband access, including low-income communities, senior citizen communities, and communities facing socioeconomic barriers to broadband adoption.

In its open rulemaking proceeding, the Commission requested comment on how the nine goals of its current Environmental and Social Justice Action Plan[201] can address barriers faced by disadvantaged communities. The Action Plan includes commitments by the Commission to integrate equity and access considerations throughout its proceedings and other policy development efforts and to improve communications capabilities for underrepresented communities.

In response, comments urged the Commission to promote opportunities for participation in the planning process by underrepresented communities as reflected in goals of the Commission's Action Plan, such as additional opportunities for public comments on BEAD program documents to ensure concerns about digital literacy and affordability are addressed. Comments also urged the Commission to prioritize projects that advance partnerships with community organizations and Tribal entities working with covered populations and underrepresented communities to support digital literacy and inclusion that will advance the goals of the Action Plan and the CPUC's overall broadband deployment goals.[202]

As part of these calls for the CPUC to address gaps and barriers for underrepresented communities, the Commission received comments from the small business groups noting that small businesses also represent key opportunities to enhance opportunities for digital inclusion and economic development and advance the goals of the CPUC's Environmental and Social Justice Action Plan for communities of color, veterans, those with disabilities among other underrepresented populations.[203]

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[200] "California Advanced Services Fund (CASF) Adoption Account," CPUC, https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/california-advanced-services-fund/casf-adoption-account.

[201] CPUC, Environmental and Social Justice Action Plan (v. 2.0, April 7, 2022) https://www.cpuc.ca.gov/ESJactionplan/.

[202] New Century Cities (pg. 6-7); l Yurok Tribe (pg. 8-9), https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M506/K522/506522560.PDF.

[203] Small Business Utility Advocates (pg. 2-3).

Additional comments on the Five-Year Action Plan itself urged the CPUC to directly incorporate detailed outreach to communities of color and disadvantaged communities to support digital inclusion and equity goals and to incorporate program design elements addressing issues of racial and economic disparity including affordability, competition, digital literacy and access.

The CPUC will continue to uphold the goals set out in the Environmental and Social Justice Action Plan, including its commitment to specifically address the needs of disadvantaged communities, Tribal lands, and low-income households through continued outreach and engagement with community-based organizations and the public. This commitment is not only reflected in this Five-Year Action Plan; the CPUC will continue to incorporate the Action Plan and the State's broadband policy goals, including those in the Broadband for All initiative, to refine its Initial Proposal and BEAD program grant design.

Regional-Local Workshop feedback echoed many of these comments, recommending partnerships with and train-the-trainer opportunities for trusted entities, including community-based organizations, to provide outreach, digital literacy, and digital navigation services to covered populations and underrepresented communities. Recommendations also included training provision in a variety of formats (e.g., small groups, individual training, in-home training, and mobile training in rural areas) and topics, including cybersecurity and internet safety, art, and telehealth usage.

The California Department of Technology (CDT) is researching digital literacy needs and barriers as part of its parallel effort to develop the State's Digital Equity Plan. Additional discussion of efforts to mitigate digital literacy issues in the State will be identified by CDT in that Plan.

5. Implementation plan

This section describes the State's comprehensive stakeholder engagement process; its priorities, planned activities, and strategies in terms of implementing the BEAD Five-Year Action Plan; and the estimated cost and timeline for achieving universal service in California.

This section addresses item 7 in the Five- Year Action Plan requirements (an external engagement process, demonstrating collaboration with local, regional, and Tribal entities) and item 10 in the Five-Year Action Plan requirements (a comprehensive, high-level plan, including estimated timeline and cost for universal service).

5.1 Stakeholder engagement process

This section describes the comprehensive external engagement process the CPUC conducted in preparation of this Plan. The CPUC intends to continue its stakeholder engagement and outreach efforts around broadband deployment and digital equity in the State—particularly to engage with covered populations and stakeholders that historically may not have had as much representation in public planning processes.

As discussed elsewhere in this Plan, the California Department of Technology (CDT) is responsible for preparing the State's Digital Equity Plan—and, as such, has conducted its own parallel stakeholder engagement process related to broadband affordability, broadband adoption, and other elements of digital equity.

This section addresses the five local coordination criteria identified in the NOFO Section IV.C.1.c, as well as CPUC's commitment to public deliberative rulemaking.

California has implemented extensive processes to identify stakeholders and stakeholder groups, conduct inclusive engagement with a broad range of communities, and facilitate engagement with stakeholders across the State.

As part of the preparation process for the Five-Year Action Plan and the BEAD program, the CPUC partnered with the California Department of Technology (CDT) to jointly conduct 17 Broadband for All, Digital Equity, and BEAD Planning Regional-Local Workshops in communities across California. These events were attended by more than 2,000 community members, local officials, and interested parties, and provided a forum for attendees to learn about planning for their communities to access programs to create digital equity, submit feedback on how the State's efforts to close the digital divide could be improved or made more inclusive, and connect with members of their communities who are passionate about digital equity in California.

In addition, the CPUC conducted Tribal consultations, as described in Section 5.1.2 below.

Following the Regional-Local Workshops and Tribal consultations, the CPUC will evaluate opportunities to partner with recommended entities, including community-based organizations, to

continue to engage covered populations and historically underrepresented communities in the planning process through trusted messengers.

The CPUC has also participated extensively in the process of crafting the State Digital Equity Plan, led by CDT, including participating in the quarterly Statewide Planning Group, attending meetings of the Outcome Area Working Groups, and engaging with CDT to support solicitation of input for the State Digital Equity Survey and Digital Equity Ecosystem Mapping (DEEM) Tool.

5.1.1 Public deliberative rulemaking

To develop rules for BEAD subgrantees, the CPUC is engaging in a public deliberative rulemaking and soliciting extensive feedback from stakeholders, similar to the process that the CPUC must take to form the basis of any CPUC-adopted decision establishing program rules, as governed by statute.[204] This is in addition to requirements in NTIA's BEAD NOFO. This means the CPUC will provide multiple additional opportunities for stakeholders and members of the public to provide input on the implementation of BEAD through the formal rulemaking process.

The CPUC initiated this process by adopting Order Instituting Rulemaking (OIR) 23-02-016 on February 23, 2023. As of the writing of this Plan, 28 parties filed written comments in response to the 14 issues and questions identified in the OIR. (See Section 5.2.) On May 31, 2023, the CPUC held a prehearing conference to solicit stakeholder input on the scope of issues to be included within the proceeding and the timeline and process for receiving additional feedback within the context of the CPUC's public deliberative process. The assigned Commissioner for R. 23-02-016 issued a Scoping Memo in July 2023, refining the issues in the scope of the proceeding and discussing the anticipated schedule.

As part of its public deliberative process, in July 2023, the CPUC issued a draft of this Five-Year Action Plan for public comment. The public comments filed have been incorporated into this Five-Year Action Plan as appropriate for submission to NTIA (see Appendix E).

The comments on the Five-Year Action Plan will also inform the development of the forthcoming draft Initial Proposal, as will all other feedback received from the Local-Regional Engagements, prehearing conference, and written comments submitted in response to the OIR. The CPUC also

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[204] California Public Utilities Code Section 1701.1 (c) requires the CPUC, upon initiating a quasi-legislative proceeding, to assign one or more commissioners to oversee the case and an administrative law judge. The assigned commissioner shall prepare and issue by order or ruling a scoping memo that describes the issues to be considered and the applicable timetable for resolution and that, consistent with due process, public policy, and statutory requirements, determines whether the proceeding requires a hearing.

Section1701.2 (d) requires the assigned commissioner or the administrative law judge to prepare and file a decision setting forth recommendations, findings, and conclusions at least 30 days prior to a CPUC vote meeting, to allow for public comment.

Section 1701.2 (e) requires that a CPUC decision be supported by findings of fact on all issues material to the decision, and the findings of fact shall be based on the record developed during the proceeding.

Section 1701.1 (e) (8) requires the CPUC to render its decisions based on the law and on the evidence in the record.

will host a technical workshop in Fall 2023 to solicit specific input from potential subgrantees and other stakeholders regarding the content of a staff proposal.[205] Additionally, the Commission will host two public participation hearings to solicit comments from the general public. The Commission will consider additional opportunities for the public to provide comment and engage in this process. The revised staff proposal will form the basis of the forthcoming Initial Proposal as it is crafted prior to its submission to NTIA.

Prior to submitting the Initial Proposal to NTIA for its required review by the end of 2023, the CPUC will issue a draft version of the Initial Proposal later this year to receive comments from stakeholders and members of the public on the proposed program design, including the BEAD-specific eligibility map, Challenge Process, Subgrantee Selection Process, project affordability requirements, labor and workforce requirements, and all other required elements of the Initial Proposal necessary to describe the proposed implementation of BEAD.

In response to those comments, the draft Initial Proposal may be revised and then submitted by the CPUC to the NTIA for its approval. Following the NTIA's approval of the Initial Proposal, the CPUC will issue a Proposed Decision formalizing these rules. Parties will have the opportunity to file comments on the Proposed Decision before the CPUC adopts it.[206]

5.1.1.1 Comments on the Five-Year Action Plan

On July 17, 2023, the CPUC issued a ruling in its public deliberative proceeding requesting comments on its draft Five-Year Action Plan.[207] The CPUC received opening and reply comments from a wide variety of stakeholders including ISPs, local governments, small business, consumer and community advocates, and legislators. The comments are each posted on the CPUC's website and will be part of the public record in the proceeding.

The comments supported and reinforced many elements of the Five-Year Action Plan. These comments also proposed a broad spectrum of revisions, including issues regarding grant design, affordability considerations, and equity that are more appropriately addressed as part of the CPUC's upcoming Initial Proposal comment process or CDT's State Digital Equity Plan public comment process.

The comments raise several important issues and themes, including:

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[205] Rule 7.5 of the CPUC's Rules of Practice and Procedure requires, for rulemaking proceeding similar to R. 23-02-016, the issuance of a staff report that contains recommendations on how to resolve the issues identified in the scoping memo, at least one workshop providing an opportunity for the parties to the proceeding to have an interactive discussion on issues identified in the scoping memo, and at least one public engagement workshop to ensure that the issues are presented to members of the public who are not parties to the proceeding so they also have the opportunity to provide input.

[206] Rule 14.3 (a) of the CPUC's Rules of Practice and Procedure allows parties to file comments on a proposed decision within 20 days of the date of its service on the parties.

[207] Administrative Law Judge's Ruling Issuing Draft Five-Year Plan and Seeking Comments (R.23-02-016), July 17, 2023, https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M514/K216/514216220.PDF.

- Discussion of the feedback and contributions from the 17 Regional Planning Workshops and three Tribal Consultations to support elements of the Five-Year Action Plan and inform the CPUC's Initial Proposal
- Recommendations and requests for further clarification of the CPUC's cost analysis and identification of the numbers of unserved locations presented by CostQuest Associates in its April 2023 Report
- Numerous requests for the CPUC to add federal and State funding programs and community asset programs, discuss additional barriers and obstacles, and correct and clarify program descriptions and data in the Five-Year Action Plan
- Proposals to further describe coordination and planning process with the State's BEAD and Digital Equity program as well as coordination with the State's planned open-access middle-mile network
- Requests to further expand on plans for the CPUC to address obstacles and barriers of affordability, permitting processes, treatment of multitenant dwellings, complicated and overlapping federal and State funding programs, and complex CPUC regulatory processes
- Discussion of the CPUC's universal service goals and calls for more detail on costs, timelines, and plans to bridge documented funding gaps
- Calls for more detailed plans for outreach to numerous stakeholder groups including service providers, tribal and local governments, small businesses, and disadvantaged communities
- Recommendations for further discussion on the technology mix of BEAD projects and analysis regarding the impact of different technologies on affordability, service quality, program effectiveness, and budget
- Calls for further commitment to the CPUC's Environmental and Social Justice Action Plan, including more plans to address racial and economic disparities, a further needs assessment for communities of color, additional and more granular data on current broadband access for covered populations including specific efforts to support communities of color.

The CPUC has reviewed each of the comments and incorporated comments into the Five-Year Action Plan where appropriate and necessary. The CPUC will also incorporate and address these comments as it further refines elements of its draft Initial Proposal and plans its Challenge Process and BEAD program grant design.

5.1.2 Tribal consultation

In addition to the 17 Regional-Local Workshops, the CPUC and CDT conducted three in-person Broadband for All, Digital Equity, and BEAD Regional Tribal Consultations with representatives of Tribes in Northern, Central, and Southern California, as well as an additional virtual consultation. (See Appendix C.) The CPUC is also conducting government-to-government consultations with

individual Tribes that requested individual consultations to further discuss the BEAD program and the individual Tribe's specific circumstances.

The CPUC has also had an appointed Tribal Advisor since 2020, who will support Tribal Nations in navigating and accessing the process for participation in the BEAD program. The Tribal Advisor will work with the CPUC's Communications Division and other entities to provide information to assist Tribes in maximizing opportunities to deploy affordable, reliable broadband service for Tribal communities utilizing strategies that respect Tribal sovereignty.

5.1.3 Full geographic coverage

The CPUC engaged the full geographic range of California through both stakeholder outreach and public engagement. As described above, the CPUC partnered with the California Department of Technology (CDT) to jointly conduct 17 Broadband for All, Digital Equity, and BEAD Planning Regional-Local Workshops in communities across California.

The full list of Regional-Local Workshops is included in Appendix B. The full list of Tribal Consultations is included in Appendix C.

5.1.4 Meaningful engagement and outreach to diverse stakeholder groups

To organize each jointly conducted Regional-Local Workshop, the CPUC and CDT collaborated with a variety of partners to engage each region's diverse stakeholder groups. Partner organizations included:

- Regional Broadband Consortia
- Community-based organizations, philanthropy, and other nonprofit organizations
- Economic development organizations
- Local governments and associations of government

Workshop partners helped to outreach to community members and local organizations in each region, with an emphasis on members of communities identified as covered populations or underrepresented communities in Digital Equity Act and BEAD guidelines. More than 2,000 community members, local officials, and interested parties attended the workshops.

With the support of CPUC's dedicated Tribal Advisor, the CPUC and CDT invited Tribal leaders, Tribal technical staff and advisors, and Tribal community members to the formal Tribal Consultations in northern, central, and southern California.

The full list of Regional-Local Workshop partners is included in Appendix B.

5.1.5 Multiple awareness and participation mechanisms

Regional-Local Workshops and Tribal Consultations were shared on CDT's Broadband for All Portal, the CPUC's Events page, and the Broadband for All Eventbrite site for Digital Equity and

BEAD Planning Workshops.[208] Partner organizations helped to raise awareness of the events and the overall BEAD planning process. Based on their experience and local knowledge, partners used outreach methods that were best suited to reach stakeholders in their regions. Methods included flyers, newsletters, social media, and local media. The CPUC and CDT also promoted the workshops and shared updates through their respective newsletters, reaching an audience of government, nonprofit, and private sector stakeholders and interested parties throughout the State.

Regional-Local Workshops and Tribal Consultations were held in person to allow for deeper engagement and interaction with stakeholders in each region. A virtual Tribal Consultation was held for any Tribes unable to attend the in-person consultations, and the CPUC anticipates conducting additional online workshops for stakeholder engagement to solicit input on crafting the Initial Proposal.

In addition to in-person and virtual events, the CPUC's public deliberative rulemaking proceeding on BEAD will also solicit extensive feedback from stakeholders and the public through written comments.

5.1.6 Clear procedures to ensure transparency

As described in Section 5.1.1 above, the CPUC ensured it followed clear procedures to ensure transparency around the BEAD proceeding. The BEAD proceeding, docketed as Rulemaking 23-02-016, was initiated via Order Instituting Rulemaking (OIR)[209] approved at the CPUC's February 23, 2023, voting meeting. The OIR indicated that the CPUC would consider rules to determine grant funding, eligibility, and compliance for funds distributed to California under the federal BEAD program and invited interested parties to provide comments on the issues identified as part of the initial proceeding scope.

The CPUC received opening and/or reply comments on these initial issues and the appropriate proceeding scope from 32 parties, many of which represent a consortia or collaboration among different stakeholder groups including labor, ISPs, small businesses, educational professionals, and advocacy organizations.

After reviewing party comments and input received at the 17 Broadband for All, Digital Equity, and BEAD Planning Regional-Local Workshops, the assigned Administrative Law Judge for R. 23-02-016 issued a Scoping Memo in July 2023, finalizing the scope of issues to be considered in the proceeding and the timeline for resolving these issues. In conducting this proceeding, the CPUC will

[208] "Digital Equity and BEAD Planning Workshops," CDT Eventbrite, https://www.eventbrite.com/cc/digital-equity-and-bead-planning-workshops-1979869.

[209] "Order Instituting Rulemaking Proceeding to Consider Rules to Implement the Broadband Equity, Access, and Deployment Program," CPUC, March 1, 2023, https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M502/K991/502991618.PDF.

abide by its established Rules of Practice and Procedure,[210] including the requirements governing *Ex Parte* communications with decisionmakers, to ensure that the public deliberative process is fully transparent. This is a rulemaking proceeding categorized as quasi-legislative so there are no ex-parte reporting requirements or restrictions for this proceeding.

As described in the Scoping Memo, the CPUC will hold at least one public technical workshop to solicit input on a draft BEAD Initial Proposal and will invite additional written comments on the draft Initial Proposal. The CPUC will formalize the BEAD program rules by voting on a Proposed Decision incorporating the Initial Proposal as approved by NTIA. Pursuant to the CPUC's rules, the Proposed Decision will be available for public comment at least 30 days before being voted on by the full Commission.

5.1.7 Outreach and engagement of unserved and underserved communities

The CPUC actively sought to engage representatives of defined covered populations and historically underrepresented communities by consulting with CDT in the planning and execution of the 17 Broadband for All, Digital Equity, and BEAD Planning Regional-Local Workshops to ensure representation of defined covered populations, including specific sections of each workshop highlighting lived experiences from members of the covered populations.

The CPUC also conducted significant outreach to all California Tribes to invite participation in the regional and virtual Tribal engagements.[211] The CPUC mailed a formal letter to all Tribal Leaders inviting each to participate in the Tribal engagements. The CPUC's Tribal Advisor coordinated with CPUC staff to follow up on this correspondence by making direct telephone calls to as many Tribes as could be reached.

The CPUC also advertised the Tribal engagements on its website, social media platforms, and in verbal conversations with stakeholders leading up to the events. The CPUC also held an online-only virtual engagement for any Tribes unable to attend the in-person regional engagements. Following these engagements, the CPUC received 20 requests for individual consultations from Tribes, which the CPUC is in the process of scheduling.

5.2 Priorities

Upon the approval of the State's Initial Proposal, which will be delivered to NTIA by no later than December 27, 2023, the CPUC may award sub-grants competitively to subgrantees to carry out the following broadband deployment activities, consistent with the BEAD NOFO: 1) unserved service projects; 2) underserved service projects; 3) projects connecting eligible community anchor institutions; 4) broadband data collection, mapping, and planning; 5) installing internet and Wi-Fi

[210] "Rules of Practice and Procedure," CPUC, May 2021, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/administrative-law-judge-division/documents/rules-of-practice-and-procedure-may-2021.pdf.

[211] Administrative Law Judge's Ruling Providing Notice of Tribal Consultations, Docket 23-02-016, May 22, 2023, https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M509/K544/509544728.PDF.

infrastructure or providing reduced-cost broadband within a multi-family residential building; 6) broadband adoption programs; and 7) other activities determined by NTIA.[212]

While the BEAD NOFO provides clear guidance on federal rules and minimum standards for the program, it also provides for State discretion on additional requirements and priorities. The CPUC is required to gather public input in an open public proceeding to determine specifically what these additional requirements might look like and how the BEAD funds will be offered to qualified subgrantees.

As discussed in Section 5.1.4, the CPUC's rulemaking proceeding to gather input on potential additional requirements, guidelines, and priorities has collected public comment from a wide variety of stakeholders and remains open for further data, input, and comments—and for the CPUC to publish draft rules. Below are the questions being considered in the initial scope of the proceeding:[213]

1. **Extremely High-Cost Threshold.** The NTIA's Notice of Funding Opportunity requires the CPUC to establish an "Extremely High Cost Per Location Threshold" in a manner that maximizes use of the best available technology while ensuring that the program can meet the prioritization and scoring requirements.[214] The NTIA expects the Extremely High Cost Per Location Threshold to be set as high as possible to help ensure that end-to-end fiber projects are deployed wherever feasible. How should the CPUC define the threshold for locations that constitute "extremely high cost" locations?

2. **Geographic Level.** The Notice of Funding Opportunity gives flexibility to states to solicit proposals from prospective subgrantees at the geographic level of their choosing—for example, on a per-location basis, per-census block basis, per-town, per-county or another geographic unit. States may alternatively solicit proposals for project areas they define or ask prospective subgrantees to define their own proposed project areas. What is the best, or most appropriate, geographic level for subgrantee proposals?

3. **Overlapping Project Areas.** What mechanism should be used for overlapping proposals to allow for a like-to-like comparison of competing proposals?

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[212] "Infrastructure Investment and Jobs Act," U.S. Congress, https://www.congress.gov/bill/117th-congress/house-bill/3684/text, at §60102(f).

[213] "California Broadband Equity, Access, and Deployment (BEAD) Program," CPUC, https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/broadband-implementation-for-california/bead-program. See also: "BEAD Rulemaking (R.23-02-016)," CPUC, https://apps.cpuc.ca.gov/apex/f?p=401:56:0::NO:RP,57,RIR:P5_PROCEEDING_SELECT:R2302016. See also the preliminary scoping memo, https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M502/K991/502991618.PDF, at p.4.

[214] "NOFO: BEAD Program," NTIA, https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf, Section IV.B.6.b.

4. **Selection Among Priority Broadband Projects.** In addition to the Primary Criteria and Secondary Criterion required in the Notice of Funding Opportunity, which additional prioritization factors should be considered?[215] How should they each be measured, and should they be weighted in prioritization?

5. **Selection Among Other Last-Mile Broadband Deployment Projects.** In addition to the Primary Criteria and Secondary Criteria required in the Notice of Funding Opportunity, which Additional Prioritization Factors should be considered?[216] How should they each be measured, and should they be weighted in prioritization?

6. **Challenge Process.** States must develop and implement a transparent, evidence-based, fair, and expeditious challenge process under which a unit of local government, nonprofit organization, or broadband service provider can challenge a determination made by states as to whether a particular location or community anchor institution within the jurisdiction of the Eligible Entity is eligible for grant funds. Among other things, the process must allow for challenges regarding whether a particular location is unserved or underserved as defined in the Infrastructure Act and Section I.C of the Notice of Funding Opportunity. What information[217] should be provided by a challenger as a basis for asserting service already exists at a location, or at locations, that disqualify them from being called "unserved?"

7. **Match Requirement.** The IIJA expressly provides that matching funds for the BEAD Program may come from federal regional government entities and from funds that were provided to an Eligible Entity or a subgrantee for the purpose of deploying broadband service under the Families First Coronavirus Response Act, the CARES Act, the Consolidated Appropriations Act of 2021, or the American Rescue Plan Act of 2021, to the extent permitted by those laws. What State funding should also be allowed to be used as matching funds?

8. **Statewide Middle-Mile.** How should the CPUC prioritize subgrantee project proposals that plan on utilizing the statewide open-access middle-mile network? Should the CPUC require applicants proposing to build their own middle-mile infrastructure with BEAD funds to make their network open access? In the event the middle-mile portion of an application significantly overlaps the statewide middle-mile network, should the applicant be required to consult with the California Department of Technology?

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[215] Additional Criteria proposed are: Equitable Workforce Development and Job Quality, Open Access, and Local and Tribal Coordination.

[216] Additional Criteria proposed are: Equitable Workforce Development and Job Quality, Open Access, and Local and Tribal Coordination.

[217] For context, refer to Decision 22-04-055, Section 19 at https://docs.cpuc.ca.gov/SearchRes.aspx?docformat=ALL&docid=470543650.

9. **Ministerial Review.** Should the CPUC include a ministerial review process whereby the Commission delegates to staff the ability to approve BEAD subgrants that meet certain criteria? What should those criteria be?

10. **Grant Conditions.** What conditions should the CPUC impose on BEAD subgrantees—for example, workforce development (e.g., job training) or affordable plans?

11. **Grant Applications.** How many application cycles should there be in a calendar year?

12. **Payments.** What payment milestones should the BEAD subgrantee program adopt?

13. **Impacts on environmental and social justice communities**, including the extent to which BEAD Program subgrants will impact achievement of any of the nine goals of the Commission's Environmental and Social Justice Action Plan.

14. **How should the Commission implement other issues for which it has discretion under the BEAD NOFO?** Parties should specify the issues, including the statute or rule, and include specific recommendations.

The CPUC will publish the draft Initial Proposal for comment in fall 2023 and it will include draft program guidelines and structure. In addition, the public will have an opportunity to provide comment on the Proposed Decision on the BEAD rules before the rules are finalized and adopted by the CPUC.

5.3 Planned activities

CPUC's plan for ensuring reliable, affordable broadband service to all residents will focus on developing and implementing a grant program that will efficiently and effectively distribute BEAD and other funding (as described in Section 3) to subgrantees to achieve universal service.

CPUC has an open rulemaking proceeding for its BEAD program as of the writing of this Plan (see Section 5.2); through this process, the CPUC will develop rules for using BEAD funding to award competitive grants to ISP partners to construct broadband infrastructure to unserved and underserved address locations. This activity will be complemented by the State's previously announced broadband deployment grants (e.g., CPUC's Federal Funding Account and California Advanced Services Fund).

The CPUC's planned activities also include extensive, ongoing public engagement and continued coordination and alignment with the State's Broadband for All efforts. These ongoing outreach efforts will continue to use the Environmental and Social Justice Action Plan as a guide to effectively include members of underrepresented communities and communities of color, small ISPs and non-traditional providers, Tribal entities, business and community leaders, and local governments. As discussed below, future outreach will take several forms and will provide

opportunities to gather further data and feedback on affordability, digital skills, workforce, and equity.

California's longstanding commitment to broad stakeholder engagement in advancing digital equity and broadband access is reflected in the California Broadband Council, established by statute in 2010 and consisting of 12 members representing the CPUC, CDT, the California Assembly and Senate, the nonprofit California Emerging Technology Fund, and other executive branch agencies. The California Broadband Council promotes broadband deployment in unserved and underserved areas of the State (as defined by the CPUC), and broadband adoption throughout the State. The Council identifies State resources, encourages public and private partnerships, and recommends policy to provide high-speed internet access throughout California.

In 2020, Governor Gavin Newsom issued Executive Order N-73-20 to take action to close the digital divide in California by improving connectivity around the State. The Executive Order also directed the California Broadband Council to develop a new Statewide Broadband Action Plan to promote digital equity throughout California. Shortly after the Executive Order, the California Broadband Council released the Action Plan to achieve three long-term goals for all Californians:

- Create access to high-performance broadband at home, schools, libraries, and businesses everywhere in the State.
- Make available affordable broadband and the devices necessary to access the internet.
- Provide avenues for training and support to enable digital inclusion.

Since releasing the Broadband for All Action Plan, the California Broadband Council has worked diligently to leverage the State's full range of tools, including policy, programs, funding, partnerships, and collaborations with federal, local, and Tribal governments, to engage stakeholders and achieve the goals of the Broadband for All Action Plan.

In addition to any technical workshops and public participation hearings in the proceeding to solicit input on crafting and refining the Initial Proposal prior to submission to NTIA, the CPUC anticipates undertaking extensive stakeholder engagement following submission of the Initial Proposal to maximize opportunities to share information, catalyze coordination between interested stakeholders, and support development of successful subgrant applications.

- The CPUC anticipates conducting informational webinars for prospective applicants at both the Challenge Process and subgrantee application phases, which will be preceded by extensive outreach to prospective attendees to ensure as many stakeholders as possible are prepared to attend.
- The CPUC will also seek to coordinate outreach for BEAD with outreach for other last-mile funding programs, including the Last Mile Federal Funding Account and California

Advanced Services Fund, in order to encourage applicants of these other programs to also consider submitting complementary applications for BEAD funds as appropriate.

- The CPUC will also leverage existing networks of applicants for these programs and associated partners, including the Regional Broadband Consortia funded through the California Advanced Services Fund Rural and Urban Regional Broadband Consortia Account, to maximize opportunities for cross-promotion of programs and synergies between complementary activities and objectives.

The CPUC has also created a team of Broadband Internet Caseworkers to help local jurisdictions, Tribes, and other stakeholders navigate the complex landscape of strategies and funding for developing affordable high-speed internet for everyone.[218] The caseworkers provide seminars and expertise about grants, project planning, data and mapping, business models, and regulations. The caseworkers will also make themselves available to meet one-on-one with participating entities to support their participation in CPUC programs. This approach was informed by the Covid-19 pandemic where it became clear that community leaders and local governments needed help accessing connectivity programs and applying for grants. The Broadband Internet Caseworkers will continue providing direct support for community leaders and local governments seeking opportunities to leverage BEAD investments to provide affordable, reliable broadband service to unserved communities in California.

As noted above, the CPUC has also had an appointed Tribal Advisor since 2020, who will support Tribal Nations in navigating and accessing the process for participation in the BEAD program. The Tribal Advisor will work with the CPUC's Communications Division and other entities to provide information to assist Tribes in maximizing opportunities to deploy affordable, reliable broadband service for Tribal communities utilizing strategies that respect Tribal sovereignty.

5.4 Key strategies

The CPUC's strategies for implementing the BEAD Five-Year Action Plan will be informed by the open and transparent rulemaking process described above (including extensive opportunities for public comment and engagement at every step); aligned and coordinated with the CPUC's ongoing efforts and the State's Broadband for All Action Plan;[219] and in full compliance with the NTIA's BEAD program requirements. These strategies will also build on the CPUC's long history of successful grant-making for the purpose of achieving broadband infrastructure deployment and digital equity in the State.

[218] CPUC, Broadband Internet Caseworkers, https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/broadband-implementation-for-california/broadband-caseworkers.

[219] "California Broadband for All," https://broadbandforall.cdt.ca.gov/about/.

5.5 Estimated timeline for universal service

California has a long-standing commitment to providing connectivity and digital equity to everyone in the State. The CPUC recognizes such an undertaking requires short, medium and long-term planning. Long-term planning is likely to require additional federal and State funding beyond the BEAD funding because the cost estimate for universal service under a fiber-to-the-premises model and using the California FFA definition of unserved, as noted in further detail in Section 5.6, exceeds NTIA's BEAD allocation.

Guided by the BEAD program requirements, the California Broadband for All Action Plan, and the outcome of the CPUC's open BEAD proceeding, the CPUC is working to develop and administer its grant programs with a goal of achieving universal broadband service in California. This means that its BEAD program may use a mix of technologies to fit within the allocation of $1,864,136,508.93 and meet the BEAD programmatic timeline requirements, which limit subrecipients to a four-year project period with a possible one-year extension under limited circumstances. The CPUC recognizes this estimated timeline may be affected by the lack of sufficient funding or other considerations. The CPUC may further refine its timeline for universal service as it updates its processes and objectives, analyzes new data, focuses its efforts to complete its Initial Proposal, conducts a Challenge Process, and administers its BEAD program.

5.6 Estimated cost for universal service

This section presents the State's data-driven model of the costs to deliver universal broadband access to unserved locations in California.

As discussed in Sections 1.2, 1.4.3, and 3.4.4, the CPUC contracted with CostQuest to estimate the number of unserved and underserved addresses and the investment required to bring broadband to areas in California lacking service. This analysis relies on different parameters than those required by the BEAD program but provides a data-driven illustration of costs associated with deploying universal, reliable broadband service throughout California.

The CostQuest analysis applies program eligibility requirements adopted in CPUC Decision 22-04-055 for the FFA last-mile grant program and relies on the analysis and validation performed by the CPUC for that program, including service availability data as of April 2023. CostQuest's analysis determined there are 996,302 underserved locations lacking access to broadband speeds of at least 25 megabits per second (Mbps) downstream and 3 Mbps upstream (25/3) through a reliable wireline connection. "Reliable wireline connection" is defined in the program as a fiber-to-the-premises or a DOCSIS 3.0 (or higher) cable connection. CostQuest's analysis designated locations served by copper plant DSL or a DOCSIS 2.0 cable connection, as well as locations served by fixed wireless, as not meeting the 25/3 Mbps speed thresholds. It has classified all of these locations using the term unserved.

In comparison, NTIA BEAD program rules classify locations as unserved where service speeds above 25/3 Mbps are unavailable. NTIA allows locations served by copper plant DSL or DOCSIS

2.0 cable connections to be classified as served where the provider reports to be offering service at speeds greater than 25/3 Mbps.

Including these technologies as served where they meet the speed thresholds results in a lower number of unserved locations under the NTIA BEAD rules. In June 2023, NTIA announced its BEAD funding allocation for California of approximately $1.86 billion. This announcement is based on a count of 306,910 unserved locations in California. The CPUC's own analysis of FCC data using the BEAD parameters for underserved locations indicated an additional 151,107 locations, for a combined total of 494,712 underserved and unserved locations, reflecting a subset of the CostQuest estimate of 996,302 for the FFA program. This smaller figure primarily comes from the broader eligibility criteria for served locations under the federal program rules and the lack of federal validation of subscriber data equivalent to the CPUC's process.

In addition to identifying unserved locations under the State FFA rules, the CPUC engaged CostQuest to analyze the investment and effort needed to meet California's universal service goals using the same criteria. CostQuest used a series of forward-looking cost models to estimate the investment to deploy a fiber-to-the-premises network to unserved and underserved locations.

Based on the modeling, an estimated $9.78 billion investment will be needed for new fiber and equipment to serve all unserved and underserved locations as defined by the CPUC in its FFA program. These locations would be served by a fiber-to-the-premises network design with additional hardening for locations in high fire threat districts. This estimate assumes no re-use of existing infrastructure (e.g., poles, conduit, manholes, etc.) in the total investment.[220]

In its analysis, CostQuest finds that many of the remaining unserved and underserved locations throughout the State are some of the most difficult and expensive to serve. For example, CostQuest details that the unserved and underserved locations falling in the top 12 percent of the "investment per location" analysis account for 50.5 percent of the total cost to build fiber-to-the-premises. While the CPUC's universal service goals will be met through a wide spectrum of programs and policies, its implementation of the BEAD funding program will apply program rules using the FCC's address fabric and latest broadband serviceable location lists to determine the unserved and underserved locations. This analysis will also include removing unserved and underserved locations from any existing grant-funded areas.

Even with the final number of unserved locations reduced using the federal program definitions, California expects the cost to serve these locations using a reliable wireline connection to remain significantly higher than NTIA's BEAD allocation of $1,864,136,508.93. The CPUC also expects that NTIA's high-cost allocation of $605,239,464.61—the amount set aside for grants in designated "high-cost areas" that may not require matching funding—will also be insufficient to cover

[220] "California Broadband Investment Model – Last Mile Funding Analysis: Process Overview and Methods," CostQuest Associates, April 2023, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/broadband-implementation-for-california/ffa-webpages/ca-broadband-investment-model_04212023.pdf.

California's proportion of unserved high-cost areas.[221] As required by BEAD program rules, California's Initial Proposal will establish an Extremely High Cost Per Location Threshold balancing the BEAD preference for future-ready reliable fiber infrastructure to the maximum extent possible while also ensuring BEAD requirements for universal coverage are met.

The CPUC will further refine its modeling for future BEAD program reporting. More specifically, California expects to update unserved and underserved broadband serviceable location data in the State's release of its draft Initial Proposal, which will include a proposed list of unserved and underserved locations eligible for BEAD funding in California. The analysis of these locations will be further refined through the State's challenge process, as defined by NTIA program rules. The State expects to run this process in 2024, upon approval of the State's Initial Proposal. (See Section 5.1.1 for further discussion of the BEAD program process.) The State also expects to update its cost modeling to include other broadband technology solutions in its Initial Proposal, to meet BEAD programmatic requirements.

5.7 Alignment

This section addresses item 12 in the Five-Year Action Plan requirements: Alignment of the Plan with other State efforts and priorities.

The vision, goals, and proposed supporting actions within this Plan are fully aligned and coordinated with the State's priorities of expanding broadband deployment and adoption. According to the California Broadband for All Action Plan, the States broadband goals are:

1. All Californians have high-performance broadband available at home, schools, libraries, and businesses.
2. All Californians have access to affordable broadband and necessary devices.
3. All Californians can access training and support to enable digital inclusion.

Each goal aligns with CPUC's funding opportunities that support last mile broadband infrastructure and deployment assistance, broadband affordability, and digital inclusion. The CPUC's Last Mile Federal Funding Account helps homes, schools, libraries, businesses, and other institutions with last mile broadband connectivity, potentially connecting to the State's Middle Mile Broadband Network. The California LifeLine Program provides monthly subsidies to low-income qualified residents to achieve broadband affordability. Also, the CPUCs Broadband Adoption Account provides funds to

[221] "Biden-Harris Administration Announces State Allocations for $42.45 Billion High-Speed Internet Grant Program as Part of Investing in America Agenda," NTIA, Press Release, June 26, 2023, https://ntia.gov/press-release/2023/biden-harris-administration-announces-state-allocations-4245-billion-high-speed. The BEAD high-cost allocation is a portion of the total BEAD allocation of $1.8 billion and is defined by NTIA using the BEAD program rules. This allocation is separate from the BEAD Extremely High-Cost Threshold designation. NTIA expects states to define an Extremely High-Cost Threshold under the grant program design rules. The CPUC has this issue under consideration as part of its deliberative rulemaking process in R.23-02-016.

increase publicly available or after-school broadband access and digital inclusion in the form of grants for devices, digital literacy training programs, and public education for communities with limited broadband adoption.

This Plan and the CPUC's programs also align with the priorities of other key State entities in terms of broadband deployment. These include the following:[222]

1. **California Department of Housing and Community Development:** Leverage existing Housing and Community Development programs to provide free broadband service for tenants in newly built housing and publicly subsidized units.

2. **California Department of Technology:** Promote existing State contractual vehicles with ISPs and vendors to support cost savings and efficient purchasing of broadband services and equipment.

3. **California Department of Education:** Lead statewide efforts to ensure that students have the computing devices and connectivity necessary for distance learning and online instruction.

4. **California Department of Aging:** Analyze the needs of aging population for access to affordable, reliable, high-speed broadband, and identify programmatic and partnership opportunities to meet these needs.

In addition to the CPUC's aligned efforts with other State entities, this Plan also aligns with the CPUC's Environmental and Social Justice (ESJ) Action Plan Version 2.0, adopted in 2022, which identified a specific objective of extending essential communications services to ESJ communities by ensuring implementation of new investments that offer ESJ communities' access to essential communications services at affordable rates. Specifically, the Action Plan committed the CPUC to ensuring that broadband investments are benefiting as many ESJ community members as possible, that essential speeds are more available, that ESJ communities meaningfully participate in the planning and implementation of the programs and investments, and to explore opportunities to leverage new investments to lower costs and increase essential speeds to address concentrations of unaffordability of communications services in ESJ communities.

The Five-Year Action Plan's intent to undertake extensive outreach and engagement with ESJ communities, to utilize BEAD investments to expand equity and access to reliable broadband service, and to leverage investments to ensure services are affordable to residents of ESJ communities align with the CPUC's existing commitment to this objective.

[222] See also the list of State partners in Table 5: Partners.

5.8 Technical assistance

This section addresses item 13 in the Five-Year Action Plan requirements: Technical assistance and capacity needed for successful implementation.

The CPUC, which is in regular contact with its Federal Program Officer, does not anticipate requesting any technical assistance from NTIA.

6. Conclusion

This Five-Year Action Plan establishes a BEAD program implementation plan for achieving California's broadband goals and priorities—and presents a needs assessment that will inform the State's Initial Proposal.

This Plan is aligned and coordinated with California's Broadband for All[223] initiative, which reflects Governor Gavin Newsom's significant commitment to close the digital divide in California. This is exemplified in the Broadband for All Action Plan,[224] prepared in response to Executive Order N-73-20,[225] and in the once-in-a-lifetime investments authorized under Senate Bill 156 (Chapter 112, Statutes of 2021)[226] which committed $6 billion toward development of a statewide open-access middle-mile network and grants for last-mile infrastructure and technical assistance.

Under the banner of Broadband for All, California's commitment to closing the digital divide, the CPUC has developed the needs assessment and implementation plan presented in this document to advance the goal of ensuring *all Californians have access to affordable, high-performing broadband service at home, schools, libraries, and businesses.*

To develop rules for the BEAD grant-making process and its future subgrantees, the CPUC is engaging in a public deliberative rulemaking and soliciting extensive feedback from stakeholders, similar to the process that the CPUC must take to form the basis of any CPUC-adopted decision establishing program rules, as governed by statute. This is in addition to requirements in NTIA's BEAD NOFO. This means the CPUC will provide multiple additional opportunities for stakeholders and members of the public to provide input on the implementation of BEAD through the formal rulemaking process.

The CPUC is also fully coordinating its BEAD activities with the California Department of Technology (CDT), which is the State of California's designated entity for the Digital Equity elements of the Infrastructure Investment and Jobs Act.

On behalf of the State of California, the CPUC submits this Five-Year Action Plan.

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[223] "California Broadband for All," https://broadbandforall.cdt.ca.gov/.

[224] "California Broadband for All Action Plan," California Broadband Council, 2020, https://broadbandcouncil.ca.gov/wp-content/uploads/sites/68/2020/12/BB4All-Action-Plan-Final.pdf.

[225] "Executive Order N-73-20," State of California, August 14, 2020, https://www.gov.ca.gov/wp-content/uploads/2020/08/8.14.20-EO-N-73-20.pdf.

[226] "Senate Bill 156," https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220SB156.

Appendix A: Additional asset inventory data

The following tables identify additional assets identified by the CPUC during preparation of this Plan, as well as assets identified by the California Department of Technology (CDT) in the course of its preparation of the State's Digital Equity Plan.

Additional asset inventory – broadband adoption assets

Entity name	Description
Build Hope, Inc.	Received a Broadband Adoption Account grant in 2023 to offer digital literacy classes and upgrade computer labs in public housing in Los Angeles and Watts through a partnership with the Housing Authority of the City of Los Angeles (HACLA.)[227]
Computers for Classrooms	Computers for Classrooms, based in Chico, Calif., provides computers at a discount for low-income households and other eligible California residents.[228]
Shasta Public Libraries	Offer Chromebooks for in-person use.[229]
Santa Cruz Public Libraries	Offer mobile Wi-Fi hotspot and device loans, including Chromebooks and Amazon tablets,[230] and several locations offer tech support and digital skills assistance.[231]
Sonoma County Library	Offers technology training and instruction in using the internet and computers.[232]

[227] "CPUC Advances Broadband Access and Equity in State," CPUC news release, April 27, 2023, https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-advances-broadband-access-and-equity-in-state-2023.

[228] Computers for Classrooms, http://computersforclassrooms.org/requests-for-computers/.

[229] "Unique Items for Checkout," Shasta Public Libraries, https://www.shastalibraries.org/unique-items-for-checkout/.

[230] "Library of Things," Santa Cruz Public Libraries, https://www.santacruzpl.org/library-of-things/.

[231] "Digital Learning," Santa Cruz Public Libraries, https://www.santacruzpl.org/digitallearning/.

[232] "Technology Training," Sonoma County Library, https://sonomalibrary.org/events/programs/technology-training.

Entity name	Description
San José Public Library	Offers Wi-Fi hotspots for take-home use, loans numerous devices, and has digital literacy workshops as well as online self-guided tech courses.[233]
San Diego Public Library	Offers computers for use with internet access.[234]
Long Beach Public Library	Lends Chromebooks and Wi-Fi mobile hotspots,[235] as well as offering computer and digital skills instruction at several library branches.[236]
Berkeley Public Library	Offers basic computer skills classes at public library branches, as well as classes at Berkeley Senior Center locations.[237]
San Bernardino County Library	Offers free Wi-fi access and public computers for use.[238]
Los Rios Community College District Computers for Students	Los Rios Community College District offers some students who meet eligibility requirements free Chromebook computers.[239]

[233] "SJ Access: Free Internet & Tech Devices," San Jose Public Library, https://www.sjpl.org/sjaccess#borrow.

[234] "Internet Access Services," City of San Diego, https://www.sandiego.gov/public-library/services/specialresources/internet.

[235] "LBPL Tech To-Go," Long Beach Public Library, https://www.longbeach.gov/library/borrow/tech-to-go/.

[236] "Computers and Printing," Long Beach Public Library, https://www.longbeach.gov/library/learn/computers-printing/.

[237] "Local Computer Classes," Berkeley Public Library, https://www.berkeleypubliclibrary.org/computers/local-computer-classes.

[238] "Free Wifi and Public Computers," San Bernardino County Library, https://sbclib.org/free-wifi-and-public-computers/.

[239] "Computers for Students," Los Rios Community College District, https://losrios.edu/student-resources/technology-resources/computers-for-students.

Additional asset inventory – broadband access assets

Asset name	Description
LA County Hotspot Locator	Los Angeles County has created a database of Wi-Fi hotspots throughout the County, many of which offer free access.[240]
City of Mountain View free Wi-Fi	The City is offering free Wi-Fi service by Ruckus Wireless at the Mountain View Public Library. The City also partnered with Google to offer free outdoor Wi-Fi and indoor Wi-Fi at selected locations.[241]
City of Santa Monica free public Wi-Fi	Free Wi-Fi service is available in several locations in the City including Annenberg Community Beach House, Palisades Park, libraries, Santa Monica Place, and Bergamot Station. [242]
Orange County Public Library – Wi-Fi on Wheels	Through this pilot initiative, the Library parks a mobile vehicle that can provide Wi-Fi access for up to 150 users within 300 yards at pre-planned locations.[243]
City of Healdsburg free Wi-Fi	The City is offering free public Wi-Fi service for residents and visitors in the "downtown area between City Hall and the Police Department (including the Plaza) as well as the Swim Center and the Community Center."[244]
City of Fremont free Wi-Fi	The City is working with Comcast to offer broadband access using Wi-Fi at two "Lift Zones" at City facilities.[245]

[240] LA County Hotspot Locator, https://lacounty.maps.arcgis.com/apps/webappviewer/index.html?id=26159b0526e64bea94533e89da583b89&utm_content=&utm_medium=email&utm_name=&utm_source=govdelivery&utm_term=.

[241] "Wi-Fi," City of Mountain View, https://www.mountainview.gov/our-city/departments/information-technology/wi-fi?locale=en.

[242] "Where to Find Free Wi-Fi in Santa Monica," Santa Monica, https://www.santamonica.com/experience-santa-monica/free-wi-fi-santa-monica/.

[243] "WiFi on Wheels," OC Public Libraries, https://ocpl.org/WifiOnWheels.

[244] "Free Public Wi-Fi," City of Healdsburg, https://www.ci.healdsburg.ca.us/167/Free-Public-Wi-Fi.

[245] "Infrastructure Services," City of Fremont, https://www.fremont.gov/government/departments/information-technology-services/infrastructure-services.

Asset name	Description
City of San Francisco free public Wi-Fi	The City offers free public Wi-Fi in select parks and on Market Street.[246]
Moreno Valley free public Wi-Fi	The City is offering free public Wi-Fi as a part of its Wi-Fi Garden project. Wi-Fi locations are listed on an interactive map.[247]
City of Pleasanton free public Wi-Fi	The City offers free public Wi-Fi at the Pleasanton Public Library.[248]
City of Long Beach free public Wi-Fi	The City offers free public Wi-Fi at City Hall, select libraries, the Long Beach Airport, and parks.[249]
City of Ukiah free public Wi-Fi	The City is offering free public Wi-Fi at the Civic Center, Municipal Airport, Municipal Golf Course, and Conference Center.[250]
City of Glendale free public Wi-Fi	The City offers free public Wi-Fi at all library locations, including outside the facility.[251]
Guerneville free public Wi-Fi	Guerneville offers free public Wi-Fi in the downtown area.[252]
City of Hayward free public Wi-Fi	The City offers free public Wi-Fi to provide internet access in the downtown area. The City is planning to expand the Wi-Fi network to the "new 21st Century Library and Heritage Plaza which are currently under construction."[253]

[246] "San Francisco WiFi," City and County of San Francisco, https://sfgov.org/sfc/sanfranciscowifi.

[247] "CLIC Get Access," Moreno Valley, https://www.moval.org/clic/get-access.html.

[248] "Free WiFi Access," City of Pleasanton, https://www.cityofpleasantonca.gov/gov/depts/lib/services/wifi.asp.

[249] "Public Wi-Fi Expansion," Long Beach, https://www.longbeach.gov/ti/modernization/public-wi-fi-expansion/.

[250] "Public WiFi Access Points," City of Ukiah, https://cityofukiah.com/public-wifi/.

[251] "Wireless Internet Access (Wi-Fi)," City of Glendale, https://www.glendaleca.gov/government/departments/library-arts-culture/wireless-internet-access.

[252] "Good news on the river: Guerneville has free Wifi," *Sonoma County Gazette*, July 5, 2022, https://www.sonomacountygazette.com/sonoma-county-news/good-news-on-the-river-guerneville-has-free-wifi/.

[253] "Downtown Hayward Public Wifi," City of Hayward, https://www.hayward-ca.gov/services/city-services/downtown-hayward-public-wifi.

Asset name	Description
Lake County free public library Wi-Fi	All branches of the Lake County Library System offer free public Wi-Fi access.[254]
City of Fort Bragg free public Wi-Fi	The City offers free public Wi-Fi in the downtown area and to visitors at the Starr Center.[255]
City of Torrance free public Wi-Fi	The City offers free public Wi-Fi using access points at the following locations: "Katy Geissert Civic Center Library, all branch libraries, Torrance Cultural Arts Center, Torrance Arts Museum and City Hall Council Chambers."[256]
UC Berkeley Library free Wi-Fi	The UC Berkeley campus provides free public Wi-Fi access for visitors. [257]
City of Lake Forest free public Wi-Fi	The City is offering free public Wi-Fi internet access in major city locations which include "City Hall, Etnies Skatepark of Lake Forest, and the Lake Forest Sports Park and Recreation Center."[258]
City of Rocklin free public Wi-Fi	The City, through a partnership with Astound Broadband, offers free Wi-Fi access in five community parks.[259]
Fresno County free public library Wi-Fi	The library system offers free public Wi-Fi internet access at all locations, accessible 24/7 near the facility.[260]
City of Chula Vista free public Wi-Fi	The City offers free public Wi-Fi at most library branches and recreation centers.[261]

[254] "Public Computers & Internet," Lake County, https://www.lakecountyca.gov/845/Public-Computers-Internet.

[255] "Public Wi-Fi," Fort Bragg, https://www.city.fortbragg.com/departments/information-technology/public-wi-fi.

[256] "FAQs," City of Torrance, https://www.torranceca.gov/government/communications-information-technology/faqs.

[257] "Wi-Fi at the libraries," UC Berkeley library, https://www.lib.berkeley.edu/visit/wi-fi.

[258] "Public WiFi," Lake Forest, https://www.lakeforestca.gov/en/residents/public-wifi.

[259] "Wi-Fi in the Parks," City of Rocklin, https://www.rocklin.ca.us/wi-fi-parks.

[260] "Free Wireless Internet Access," Fresno County Public Library, https://www.fresnolibrary.org/about/wireless.html.

[261] "Digital Equity and Inclusion Strategy," City of Chula Vista, https://www.chulavistaca.gov/businesses/smart-city/internet-access.

Asset name	Description
City of Santa Clara public library Wi-Fi	The City's public library offers internet access through Wi-Fi using a personal device.[262]
SonomaFi	Through the SonomaFi program, Sonoma County libraries lend Wi-Fi hotspots and Chromebooks to cardholders to provide free broadband access.[263]
City of Pasadena free public Wi-Fi	The City offers free public Wi-Fi at 15 of its 33 parks and received a $1.5 million grant in 2022 from the Department of Housing and Urban Development (HUD) to extend the service to all parks and park facilities.[264]
City of Hawaiian Gardens free public Wi-Fi	The City offers free public Wi-Fi at key locations including City Hall, C. Robert Lee Activity Center, Public Safety Center/Library, Lee Ware Park, Helen Rosas Center, Clarkdale Park, Teen Center, and Fedde Sports Complex.[265]
El Dorado County Library free Wi-Fi	All County library locations offer free Wi-Fi access.[266]
Folsom Public Library free Wi-Fi	The Folsom Public Library provides Wi-Fi access inside and outside the facility.[267]
Sacramento County Library free Wi-Fi	County library branches provide Wi-Fi access.[268]

[262] "Wi-Fi Access," City of Santa Clara Library, https://www.sclibrary.org/services/computers-and-printing/wi-fi-access.

[263] "Free or Affordable Technology," Santa Rosa Junior College, https://onlinestudentservices.santarosa.edu/free-or-affordable-technology.

[264] "City of Pasadena Receives $1.5 Million Grant to Expand Free Public Wi-Fi Service in City Parks," City of Pasadena news release, March 22, 2022, https://www.cityofpasadena.net/city-manager/news/city-of-pasadena-receives-1-5-million-grant-to-expand-free-public-wi-fi-service-in-city-parks/.

[265] "FREE WiFi Hotspots now available!," City of Hawaiian Gardens, https://www.hgcity.org/services/free-wifi-hotspots-now-available-in-hawaiian-gardens.

[266] "About the Library," El Dorado County Library, https://eldoradolibrary.org/about-the-library/.

[267] "Computers," Folsom Library, CA, https://www.library.folsom.ca.us/services/computers.

[268] "Locations," Sacramento Public Library, https://www.saclibrary.org/Locations.

Additional asset inventory – digital equity assets

Asset name	Description
City of Long Beach Digital Inclusion Initiative	The initiative connects individuals with low-cost internet services through the human-I-T Connect Program, affordable computer resources through the Human-I-T Equip Program, and digital literacy training resources under the Human-I-T Include Program. It also offers a platform called ConnectedLB that allows households to search for low-cost internet services and devices in their zip code.[269]
County of Los Angeles Internal Services Department (ISD) – Delete the Divide; Digital Navigator Project	The ISD-led Delete the Divide initiative connects County residents and small businesses in communities impacted by the digital divide with digital inclusion resources,[270] and is launching a Community Broadband Networks pilot to provide free high-speed internet service in underserved neighborhoods.[271] ISD also received a Broadband Adoption Account grant in 2023 to support Digital Navigators who will assist residents in communities impacted by the digital divide in acquiring computer devices and internet services as well as providing ongoing support and training.[272]
United Way California Capital Region	Offers digital skills training, free internet and hotspots, as well as refurbished desktops/devices to under-resourced populations in the Sacramento area.[273]

[269] "Digital Inclusion Community Resources," Long Beach Technology & Innovation, https://longbeach.gov/ti/digital-inclusion/resources/.

[270] Delete the Divide, https://www.deletethedivide.org/.

[271] "Community Broadband Networks," Delete the Divide, https://www.deletethedivide.org/community-broadband/.

[272] [272] https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-advances-broadband-access-and-equity-in-state-2023

[273] "Digital Equity," United Way California Capital Region, https://www.yourlocalunitedway.org/our-work/support-families/digital-equity/.

Asset name	Description
Community Tech Network (CTN) and EAH Housing Digital Equity Partnership	With funding from the CPUC, CTN (a nonprofit focused on digital literacy and inclusion) has partnered with EAH Housing (an affordable housing nonprofit) to offer digital skills training to residents in the Central Valley. The program includes eight hours of technology classes, and a certificate and new tablet device upon completion of the program.[274]
EveryoneOn	EveryoneOn is bridging the digital divide gap by connecting people in under-resourced communities with affordable broadband internet service and computers and digital literacy training.[275] The organization's programs are available nationally, and it has specific initiatives in California: its Enrollment Assistance Hotline, which provides live guidance on the internet subscription process, is available in Los Angeles, San Diego, and the Bay Area;[276] and the organization received a Digital Equity Spark Grant from the Michelson 20MM Foundation to develop a toolkit for diverse organizations in California to build capacity for digital equity work through a "train the trainer" model.[277]
Fresno Coalition for Digital Inclusion (FCDI)	FCDI is made up of representatives from local government, educational institutions, and community-based organizations and works to improve digital inclusion by drawing on cross-sector community partnerships to solve digital equity challenges throughout Fresno County.[278]

[274] "CTN's Exciting New Digital Equity Initiative with EAH Housing in the Central Valley", Community Tech Network, https://communitytechnetwork.org/blog/ctns-exciting-new-digital-equity-initiative-with-eah-housing-in-the-central-valley/.

[275] Everyone On, https://www.everyoneon.org/.

[276] "About Us," EveryoneOn, https://www.everyoneon.org/about-us#mission.

[277] "Building Digital Inclusion Capacity in Your Community," EveryoneOn, https://www.everyoneon.org/digital-communities.

[278] "Opening opportunities through digital inclusion in Fresno, California," Strive Together, https://www.strivetogether.org/opening-opportunities-through-digital-inclusion-in-fresno-california/.

Asset name	Description
School2Home	The initiative works with partner schools in 12 districts throughout the State to implement the initiative's 10 core components, including Technology Bundles for Students and Teachers, Parent Engagement and Education (which includes six hours of digital literacy training for parents), Student Tech Expert Development, and more.[279]
City of Oceanside Digital Equity Plan	The City utilized ARPA funding to develop a Digital Equity Plan with three main pillars: access to the internet, access to devices, and promoting digital literacy. In May 2022, the City Council approved an agreement with SiFi networks to install a citywide fiber network. The Oceanside Public Library offers digital literacy training classes weekly and has started a small-scale effort to lend digital devices; Oceanside Senior Services provides free computer classes for seniors.[280]
ATA College	Offers a fiber optic certification program in San Diego.[281]

[279] "About Us," School2Home, https://school2home.org/about/.

[280] "Digital Equity Study," City of Oceanside, https://www.ci.oceanside.ca.us/government/city-manager/communications/digital-equity-study.

[281] "Become a Certified Fiber Optic Technician," ATA College, https://atacollege.edu/programs/fiber-optics-technician-certification/.

Appendix B: Schedule of public engagements

This appendix contains the schedule of public engagements the CPUC facilitated to conduct stakeholder outreach and engagement during the development of this Plan.

Table 12: Schedule of public engagements

Date	Region	Location	CPUC and CDT's organizing partners
Apr 14, 2023	North San Joaquin Valley	Merced College 3600 M Street, Merced	San Joaquin Valley Regional Broadband Consortium (SJVRBC), Central Valley Higher Education Consortium (CVHEC)
Apr 15, 2023	Central and South San Joaquin Valley	Fresno City College 1101 E University Avenue, Fresno	San Joaquin Valley Regional Broadband Consortium (SJVRBC)
Apr 21, 2023	Southern Border	San Diego Central Library 330 Park Blvd, San Diego	San Diego Association of Governments (SANDAG), Imperial Valley Economic Development Corporation (IVEDC), Imperial County Transportation Commission (ICTC), Southern Border Broadband Consortium (SBBC)
Apr 27, 2023	Northeastern - Upstate	Chico Masonic Family Center 1110 W East Avenue, Chico	North State Planning and Development Collective, CSU Chico, Northeastern and Upstate Regional Broadband Consortiums
Apr 28, 2023	North Bay North Coast	Santa Rosa Veterans Building 1351 Maple Ave, Santa Rosa	North Bay North Coast Broadband Consortium, consisting of Marin County, Mendocino County, Napa County, and Sonoma County
May 3, 2023	Redwood Coast	Jefferson Community Center 1000 B St., Eureka	Redwood Coast Connect Consortium, Redwood Coast Economic Development Commission, Access Humboldt

Date	Region	Location	CPUC and CDT's organizing partners
May 5, 2023	San José/Santa Clara County	Santa Clara County Office of Education 1290 Ridder Park Dr, San José	City of San José (City), County of Santa Clara (County), Santa Clara County Office of Education (SCCOE), Joint Venture Silicon Valley (JVSV)
May 11, 2023	Capital Area/ Sacramento	Sacramento Central Library 828 I Street, Sacramento	Valley Vision, Capital Region Coalition for Digital Inclusion (CRCDI), Connected Capital Area Broadband Consortium (CCABC), consisting of Sacramento County, Sutter County, Yolo County, and Yuba County
May 12, 2023	Gold Country	Grass Valley Veterans Memorial Building 255 S Auburn St, Grass Valley	Sierra Business Council, Gold Country Broadband Consortium, consisting of El Dorado County, Nevada County, Placer County, and Sierra County
May 16, 2023	Inland Empire (San Bernardino/ Riverside)	CSU San Bernardino 5500 University Pkwy, San Bernardino	Inland Empire Regional Broadband Consortium (IERBC), the County of San Bernardino (CSB), the County of Riverside
May 19, 2023	Los Angeles	LA Trade Tech Campus 400 W Washington Boulevard, Los Angeles	Los Angeles Digital Equity Action League (LA DEAL)
May 20, 2023	Los Angeles (Long Beach)	Veterans Park Social Hall 101 East 28th Street, Long Beach	Southern California Association of Governments (SCAG)
May 24, 2023	Orange County	Orange County Administration South Building 601 North Ross Street, Santa Ana	County of Orange and Orange County Business Council (OCBC)
May 30, 2023	Central Sierra	Tuolumne County Resiliency Center 18241 Bay Avenue, Tuolumne	Central Sierra Broadband Utility Zone, consisting of Alpine County, Amador County, Calaveras County, Mariposa County, and Tuolumne County
Jun 1, 2023	Pacific Coast	Hancock College 800 S College Drive, Santa Maria	Economic Development Collaborative (EDC), Santa Barbara Foundation (SBF)

Date	Region	Location	CPUC and CDT's organizing partners
Jun 2, 2023	Central Coast	CSU Monterey Bay 4314 6th Avenue, Seaside	Monterey Bay Economic Partnership (MBEP), The Central Coast Broadband Consortium (CCBC), consisting of Monterey County, San Benito County, and Santa Cruz County
Jun 8, 2023	Bay Area	Oakstop - The Broadway Event Hall 2323 Broadway Avenue, Oakland	#OaklandUndivided, the East Bay Economic Development Alliance (EBEDA), Tech Exchange, City of San Francisco Digital Equity, San Francisco Tech Council

CPUC – CDT BEAD workshops flyer

CPUC and CDT Announce Broadband for All, Digital Equity, and BEAD Regional Planning Workshops

The internet is now an essential part of everyday life. Yet one out of five Californians lack access to affordable, reliable broadband service, devices, and the skills to use them.

Millions in our state are unable to access essential government services and realize other social and economic benefits that most others enjoy due to the impact of digital equity barriers. This gap is referred to as the "digital divide," and most affects those in low-income households, seniors, the disabled, veterans, incarcerated individuals, members of racial and ethnic minority groups, those with language barriers and low levels of literacy, tribal communities, and rural residents.

Broadband for All is the state's overarching program to close the digital divide and foster digital equity in our communities. The state has invested billions of dollars to achieve Broadband for All and ensure that every resident has access to economical and dependable internet, devices, and skills training. However, more needs to be done.

The State Digital Equity team led by the California Department of Technology (CDT), the California Public Utilities Commission (CPUC), and other state agencies and local partners are hosting 20 Broadband for All, Digital Equity, and Broadband Equity, Access, and Deployment (BEAD) Regional Planning Workshops across the state.

At each workshop, community members and local organizations are invited to take part in the development of the State's Digital Equity and BEAD Five-Year Action Plans that will determine how future federal dollars are allocated to address digital inequities in each community.

Protecting California since 1911

The CPUC regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies.

@CaliforniaPUC

Attend a workshop near you

All events are free and open to the public. Register for a workshop in your area and do your part to close the digital divide today. As timing for individual workshops may change, please visit this website for the most up-to-date information.

Date	Location	Registration Link
April 14	**Merced** (Merced College - Library)	**Register**
April 15	**Fresno** (Fresno City College, Old Administration Building – Cafeteria)	**Register**
April 21	**San Diego** (San Diego Central Library)	**Register**
April 27	**Chico** (Chico Masonic Family Center)	**Register**
April 28	**Santa Rosa** (Santa Rosa Veterans Memorial Building)	**Register**
May 3	**Eureka** (Jefferson Community Center)	**Register**
May 5	**San Jose** (Santa Clara County Office of Education, Ridder Park Site)	**Register**
May 11	**Sacramento** (Sacramento Central Library)	**Register**
May 12	**Grass Valley** (Grass Valley Veterans Memorial Building)	**Register**
May 16	**Inland Empire** (CSU San Bernardino)	**Register**
May 19	**Los Angeles** (LA Trade Tech Campus)	**Register**
May 20	**Long Beach** (Veterans Park Social Hall)	**Register**
May 24	**Santa Ana** (Orange County Administration South Building)	**Register**
May 30	**Tuolumne** (Tuolumne County Resiliency Center)	**Register**
June 1	**Santa Maria** (Allan Hancock College)	**Register**
June 2	**Seaside** (CSU Monterey Bay Student Center)	**Register**

For additional events in your area, visit BroadbandforAll.cdt.ca.gov/events.

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The CPUC regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies.

@CaliforniaPUC

Regional-Local Workshop example 1

Friday, April 14

Broadband for All, Digital Equity, and BEAD Planning Workshop - Merced

Part of the Digital Equity and BEAD Planning Workshops collection

North San Joaquin Valley Broadband for All, Digital Equity, and BEAD Planning Workshop

By Department of Technology
179 followers
Follow

When and where

Date and time
Friday, April 14 · 8:30am - 1:30pm PDT

Location
Merced College - Library/Learning Resource Center (2nd Floor) 3600 M Street Merced, CA 95348
Show map

Regional-Local Workshop example 2

Friday, May 12

Broadband for All, Digital Equity, & BEAD Planning Workshop Northern Sierra

Part of the Digital Equity and BEAD Planning Workshops collection

Gold County - Broadband for All, Digital Equity, and BEAD Planning Workshop

By **Department of Technology**
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When and where

Date and time
Friday, May 12 · 10am - 3pm PDT

Location
Grass Valley Veterans Memorial Building 255 South Auburn Street Grass Valley, CA 95945

Show map

Regional-Local Workshop example 3

Tuesday, May 16

Broadband for All, Digital Equity and BEAD Planning Workshop- Inland Empire

Part of the Digital Equity and BEAD Planning Workshops collection

Inland Empire (San Bernadino/ Riverside) - Broadband for All, Digital Equity, and BEAD Planning Workshop

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When and where

Date and time
Tuesday, May 16 · 2 - 6pm PDT

Location
CSU San Bernardino 5500 University Pkwy San Bernardino, CA 92407

Show map

Appendix C: Summary of Tribal consultations

This appendix contains the schedule of Tribal consultations the CPUC facilitated to conduct stakeholder outreach and engagement during the development of this Plan.

Table 13: Schedule of Tribal consultations

Date	Region	Location
June 20, 2023	Northern California Tribes	Redding Library Community Room 1100 Parkview Avenue, Redding
June 22, 2023	Central California Tribes	Eagle Mountain Casino 1850 West St., Porterville
June 27, 2023	Southern California Tribes	Kumeyaay Community College 910 Willow Glen Drive, El Cajon
July 12, 2023	Virtual Statewide Tribal Consultation	Held from 1:00 pm to 3:00 pm Registration link: Broadband for All, BEAD & Digital Equity Tribal Consultation - Virtual Tickets, Wed, Jul 12, 2023 at 1:00 PM | Eventbrite.

Tribal consultation example 1

Tuesday, June 20

Broadband for All, BEAD & Digital Equity Tribal Consultation - Northern CA

Part of the Digital Equity and BEAD Planning Workshops collection

Tribal Consultation between Northern California Tribes, CPUC, and CDT regarding broadband and digital equity.

By Department of Technology
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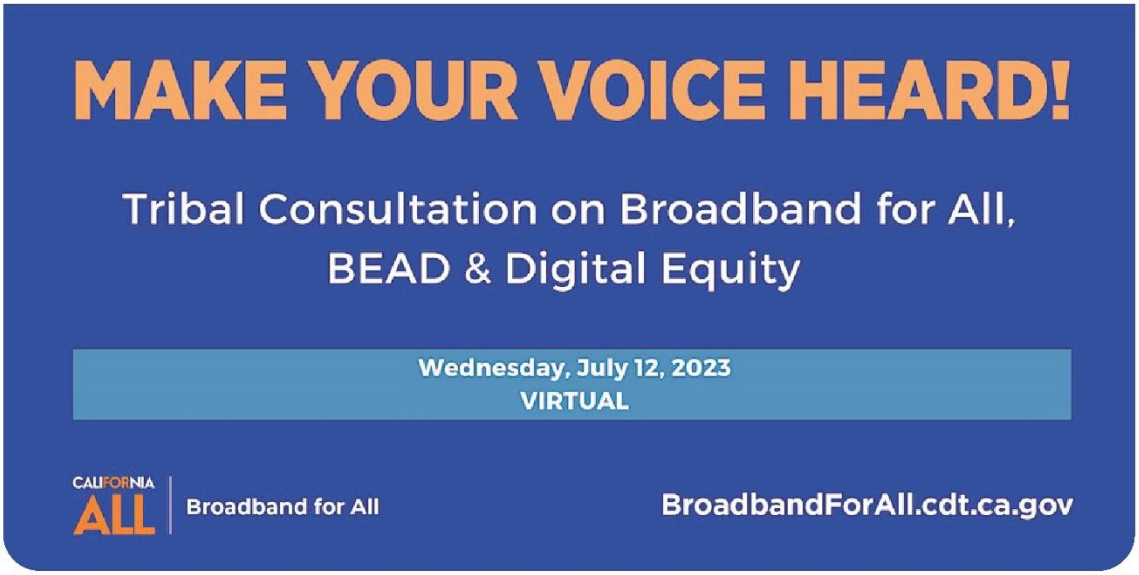
When and where

Date and time
Tuesday, June 20 · 11:30am - 4pm PDT

Location
Redding Library Community Room 1100 Parkview Avenue Redding, CA 96001
Show map

Tribal consultation example 2



Wednesday, July 12

Broadband for All, BEAD & Digital Equity Tribal Consultation - Virtual

Part of the Digital Equity and BEAD Planning Workshops collection

Virtual Tribal Consultation between California Tribes, CPUC, and CDT regarding broadband and digital equity.

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Appendix D: Cost model data

As part of its work on the Federal Funding Account as authorized by SB 156, CPUC staff has managed an update to the previous California Cost Model. However, the Federal Funding Account is funded by ARPA—which predates BEAD, so it operates under a different metric for unserved locations that are eligible for program funding. The Cost Model analysis designates locations served by copper plant DSL or a DOCSIS 2.0 cable connection, as well as locations served by fixed wireless, as not meeting the 25/3 Mbps or the 100/20 Mbps speed thresholds. It has classified all of these locations using the term unserved.

CPUC's work to update the cost / investment model under the BEAD program will use:

a. The BEAD-mandated definition of "unserved" for broadband availability, and

b. The locations in California issued to CPUC by NTIA as forming the basis for the State's BEAD allocation.

Table 1. Unserved Definition

	California Service Definition	Locations
Unserved	**Service <= 100x20Mbps.** Lacking access to at least 100Mbps upstream x 20Mbps downstream with FTTP or at least DOCSIS 3.0.	996,302

Table 2. California FTTP Network Investment Summary—unserved locations

	Unserved
FTTP Network Investment	$ 7,463,192,829
Additional Fire Hardening	$ 2,316,359,894
Total	**$ 9,779,552,723**
Locations	996,302

Appendix E: Public comments on draft Five-Year Action Plan