



UNIVERSITY OF HAWAII SYSTEM

Legislative Testimony

Testimony Presented Before the
US Senate Committee on Indian Affairs Oversight Hearing
“Setting New Foundations: Implementing the Infrastructure Investment and Jobs Act for
Native Communities”

Wednesday, May 4, 2022 at 2:30pm ET

By

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Good afternoon, Chair Schatz, Vice Chair Murkowski and members of the committee:

Thank you for allowing me to testify this afternoon representing the State of Hawai'i's broadband interests. In the interest of maximizing the benefit to Hawai'i to strategically invest the once-in-a-lifetime public funding opportunity, Governor Ige requested that we collaborate with all of Hawai'i's public and community stakeholders to coordinate plans and efforts to help ensure robust, reliable and affordable broadband access for all of Hawai'i's citizens. This includes the substantial funding to the State of Hawai'i, Department of Hawaiian Homelands (DHHL) under the Tribal Broadband Connectivity program funded through the Consolidated Appropriations Act of 2021 (CAA) and the Infrastructure Investment and Jobs Act (IIJA), representing a total of at least \$90 million to directly benefit the native Hawaiian community. As a key strategy to maximize the overall investment in broadband infrastructure and support for the State of Hawai'i, we are working with DHHL leadership to ensure that we can appropriately leverage the direct investment, together with the substantial amounts anticipated to benefit Hawai'i's overall broadband portfolio; that overall statewide investment will also benefit the native Hawaiian community at large.

On behalf of Governor Ige and the State of Hawai'i, we are grateful for this once-in-a-lifetime opportunity to make strategic investments in infrastructure, and wrap-around digital equity, literacy and adoption support services to ensure that our citizens will be empowered with critically needed broadband service for current and future generations. Our responsibility in this statewide coordination role is to align the set of program opportunities with the critical needs of Hawai'i, to identify the strategic efforts that will maximize the benefits from the available funds, to identify and enable the assembly of effective competitive proposals, and to coordinate all of these efforts to ensure we can support the objective of sustainable, robust, resilient and affordable broadband access for all of our residents.

Our statewide coordination efforts began in 2021, anticipating that multiple programs were being crafted to deliver substantial Federal support to states. Having decades of in-house experience with state, regional and national critical telecommunications infrastructure, we had already been working to independently encourage investments in

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critical trans-Pacific submarine fiber optic cable systems to ensure that Hawai'i would not be forced to re-visit the bandwidth supply shortages of the 1990s. Prior works had already demonstrated that significant new capacity would be required in all manner of statewide broadband infrastructure to adequately empower our citizens to access and benefit from the future of education, healthcare, entertainment, commerce and the full range of global information resources. A critical gap in commercial investments was evident as the aging inter-island submarine fiber optic cable systems, and the terrestrial fiber middle mile systems connecting those submarine systems were showing their age, and causing concern as to the capacity and reliability of modern broadband services supporting essential education, healthcare and government services. The limited capacity in this crucial middle mile infrastructure was a major factor in keeping Hawai'i's residents from access to truly robust broadband services, while the risk of service interruption was unfortunately too close for comfort - a fault in one of the inter-island submarine systems demonstrated the devastating impacts possible as most of the island of Kauai (over 70,000 residents) was literally cut off from the internet (and cable TV and phone service) for nearly a full day in 2019.

Under the leadership of University of Hawai'i President Lassner, and with the support of multiple grants from the National Science Foundation, we have been working to develop programs and high capacity network access activities around developing trans-Pacific submarine cable systems throughout the Pacific region. In addition to successfully acquiring capacity on one of the new trans-Pacific systems in 2018, we've collaborated with a number of international partners to build connections on Guam, serving as an extension of our own network to directly connect with Australia, New Zealand, Singapore and Japan, as well as numerous other points at the western rim of the Pacific. These efforts and the successful uses of the resulting robust broadband access underscore the critical need to continue to develop Hawai'i's assets to encourage future global connectivity, and ensure our communities have access to global information resources. As with the numerous island countries throughout the Pacific, it is critical that we pay attention to ensuring our own islands of Hawai'i have the necessary robust and resilient capacity to connect all of our citizens to the benefits of broadband services.

In addition to the critical and unique challenges with broadband technology infrastructure serving our isolated island geography, we also believe that the range of wrap-around services supporting digital equity, access and literacy are absolutely critical to effective adoption and use of broadband services. Together with direct outreach and support by DHHL to its own native Hawaiian communities, we expect that our statewide efforts will provide broad opportunities to elevate the overall digital literacy of our community, and in doing so, help to address historical inequities in access to and effective use of technologies including broadband services. We will intentionally

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integrate wrap-around support services as a pillar of our investment strategies to help ensure that historically disadvantaged communities have opportunities to access and effectively utilize the breadth of information and services enabled by our extended broadband infrastructure. Early efforts to assess and deploy solutions for the digital equity and literacy needs of the community are underway, and will serve as the basis for the statewide digital equity and literacy planning and capacity efforts to be supported by the anticipated IJA-established programs. Combined with a number of broadly supported technology workforce development and training efforts, these digital equity and literacy programs will be integrated to provide broad support for our widely distributed community needs.

Anticipating direct receipt of substantial Federal funds, DHHL Director William Aila, Deputy Director Tyler Gomes and Special Assistant Niniau Kawaihae, started work on planning for deployment of services to support the range of DHHL statewide locations and beneficiary communities. Their initial assessment of costs to provision statewide coverage did identify significant cost and availability hurdles, in particular for connectivity between the widely distributed native Hawaiian communities on all islands. As part of our statewide coordination role, we engaged in early and ongoing conversations with DHHL and their retained consultants to help round out their understanding of the Hawai'i telecommunications market. While the specifics of the infrastructure to be deployed remains to be fully developed, we expect that DHHL will look to implement a mix of fiber-to-the-premises and fixed wireless services to support connections throughout its communities to fully address unserved and underserved locations, to overcome the limited availability of services offered by the current incumbent provider. The planned build-outs together with the anticipated statewide coverage by Low Earth Orbit (LEO) provider Starlink/SpaceX, will effectively help to ensure services are universally available in DHHL communities. The DHHL efforts will also address the individual needs of the native Hawaiian members of community, fully coordinated with our statewide efforts to build and fund the critical human support infrastructure.

The high cost middle mile infrastructure constraints we identified independently of the DHHL team, were consistent with the challenges DHHL and its consultant flagged during the initial planning effort. As part of our overall coordination role for statewide investments, we did identify the opportunity to share access to new strategic middle mile assets, including inter-island submarine fiber optic cable systems, as a clear win emerging from cooperative planning and deployment across the range of Federal programs, including the Tribal Broadband Connectivity program. Our overall statewide efforts include coordination of use of a number of broadband funding sources, including the US Treasury Coronavirus Capital Projects Fund (CCPF) established under

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American Rescue Plan Act of 2021 (ARPA), and the range of NTIA programs established under IIJA, including the Broadband Equity, Access and Deployment (BEAD) program, the set of Digital Equity programs, and the competitive Enabling Middle Mile Broadband Infrastructure (EMMBI) program. We do expect to make strategic investments in the critical, and clearly aging and brittle, middle mile infrastructure throughout Hawai‘i, including new inter-island submarine and supporting terrestrial fiber optic cable routes. These strategic middle mile investments are critical to cover current and anticipated future needs for all manner of providers and consumers of broadband services throughout Hawai‘i.

Comprehensive efforts to close the gaps in middle mile, last mile and wraparound support services are critical to ensure Hawai‘i’s communities are properly supported to thrive into the future. We expect the critical middle mile efforts will be funded by CCPF, BEAD and the EMMBI programs. Further, BEAD and Digital Equity (DE) program funds will address both last mile gaps, and affordability, equity and literacy wrap-around services to maximize the benefits to all residents of Hawai‘i. Additional specifics as to the distribution of projects between the various sources will be completed as soon as the NTIA notice of funding opportunity (NOFO) material is released for BEAD and EMMBI (anticipated on or about May 16th). In advance of these program rules being available, we have been working with a number of potential partners to plan our approach to address the required construction efforts. This includes the just announced award of landing site survey and desktop design work for the posed inter-island submarine cable system build (funded with State Coronavirus State and Local Fiscal Recovery Fund (CSLFRF) dollars). While we have the state CCPF plans under development, we are looking forward to the guidance that the additional NOFOs will provide so to we can maximize the opportunities for access to the funds. There is also substantial uncertainty around the to-be-released FCC service maps, upon which the distribution formulas for BEAD and DE programs will be based; at this time, our initial planning is around the amounts where we have certainty, with expectation that some additional amounts will become available once the new maps are available later this year.

Looking forward, we expect ongoing challenges and bumps along this road. Effective investment of the public funds will take time, effort and participation on the part of the entire community. Our partners include a number of public entities that each bring our own internal policies and regulations that must be taken into account during project planning and execution. Even with the substantial amounts available, there can never be enough funding to build everything for everyone; all solutions must be value-driven and focus on the investments that will deliver benefit over an extended period of time. Agencies overseeing these programs, in particular NTIA, have been stretched in

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working through the mass of details necessary to execute on the intent of the new laws, including the need to staff new programs from the ground-up, all during a time when expedited execution is the common expectation. We fully expect demands on all of us to increase exponentially over the next couple of weeks with the anticipated release of NOFOs for perhaps three additional new NTIA programs (BEAD, DE plan and EMMBI), established under IIJA. Many of the new programs are working hard to establish and fully vet rules, criteria, proposals and plans, and have experienced delays in getting to execution. Now is the time to take on fully collaborative execution, and work to get newly minted programs into delivery mode.

Thank you for the opportunity to testify this afternoon. I am happy to answer any questions, and to provide clarification on our activities here in Hawai‘i.